PRINTING EQUIPMENT Engineer

APRIL 1945

• A technical publication for the mechanical executive responsible for printing production, equipment and supplies in the commercial, magazine, private plant and daily newspaper field.

POSTWAR... *Immediate—and Long Range*

IN early postwar, peacetime order must replace wartime dislocations. Many individuals will buy goods which they have long gone without, and industry will make its purchases. Some of this "pent up" demand will be met by products with which markets are already familiar—other segments of it will be served by improved equipment.

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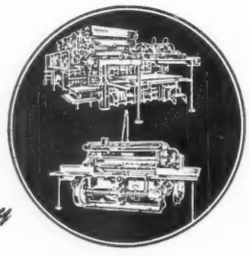

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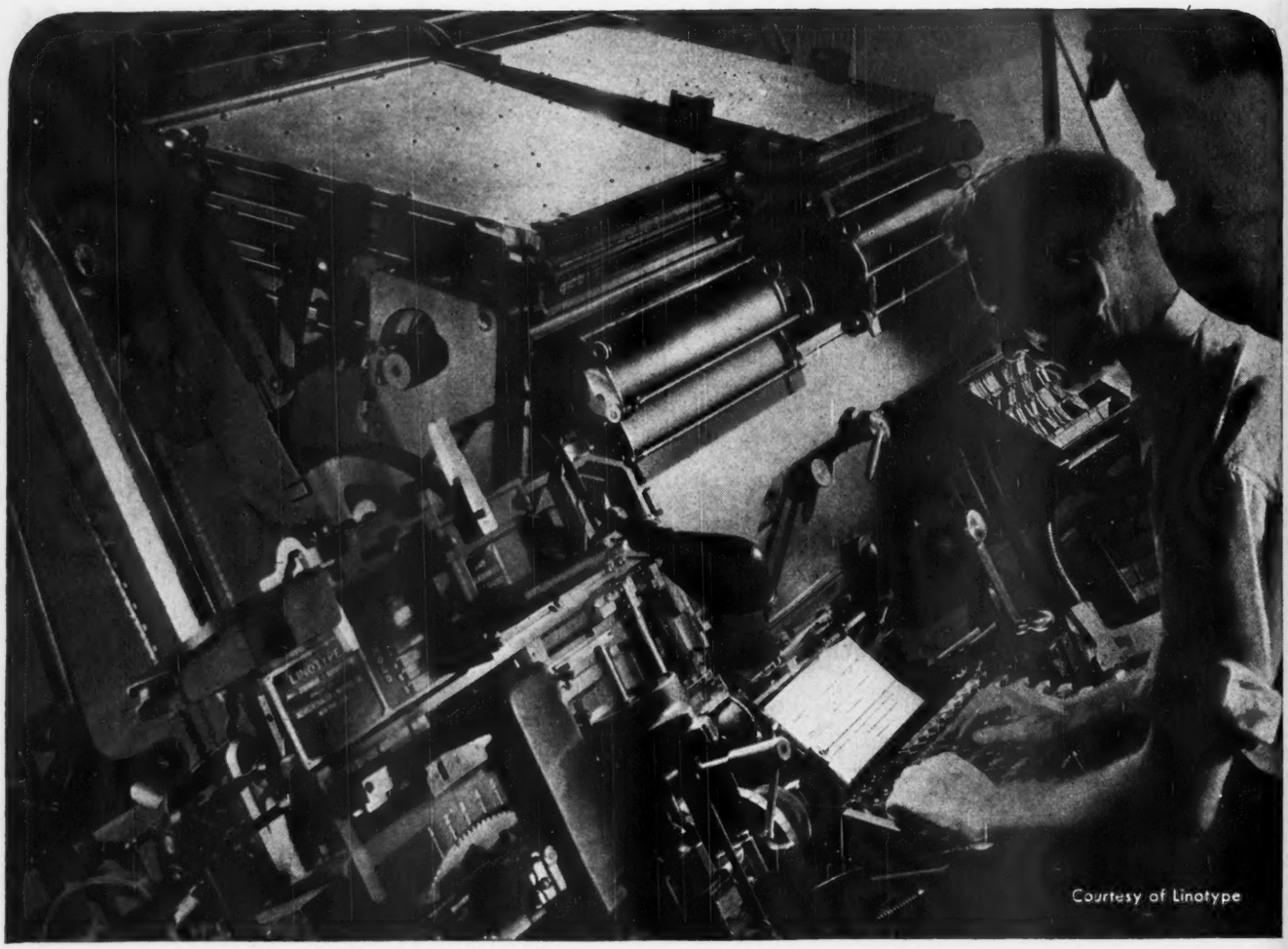

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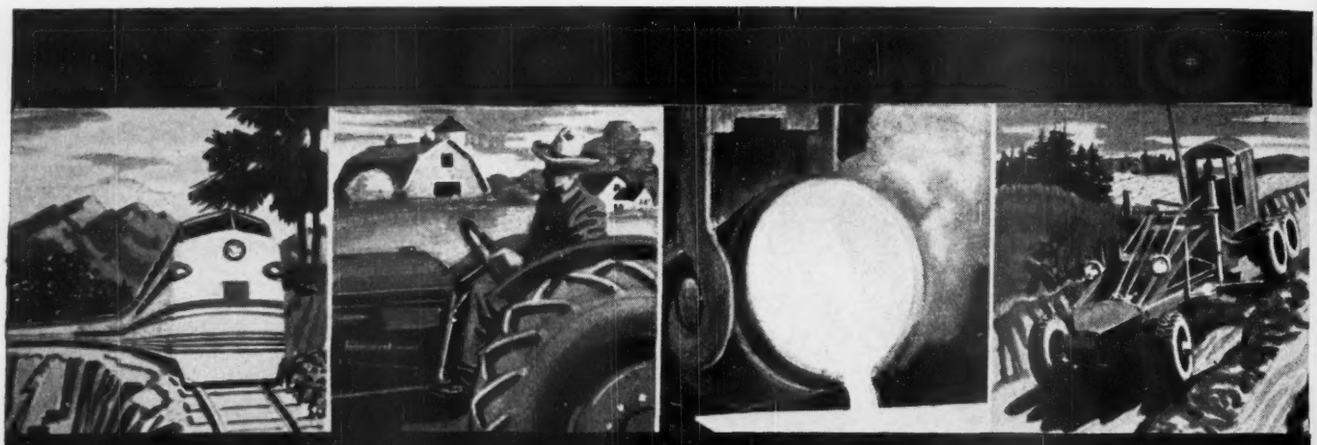

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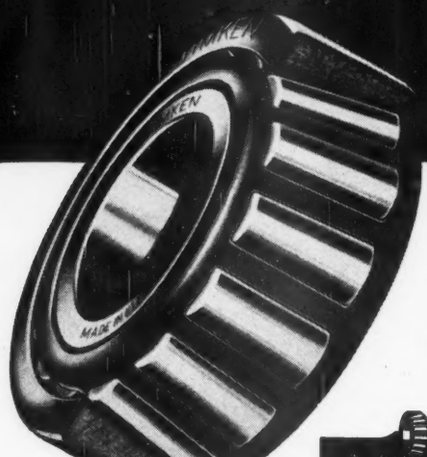

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PRINTING EQUIPMENT *Engineer*

Volume 70 Number 1

A technical publication for the mechanical executive responsible for printing production, equipment and supplies in the commercial, magazine, private plant and daily newspaper field.

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STANDARD BOOK ON ESTIMATING for PRINTERS—By Fred W. Hoch. Revised 1941 edition. This book is a primer for students and a reference for printers and estimators. Every printing plant should have a copy. Author explains all operations in commercial printing plant and shows production time allowance for each in hours and decimal hours. Size, 6 in. by 9¼ in., 268 pages, $3.75 per copy, cash with order.

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for Automatic Autoplates

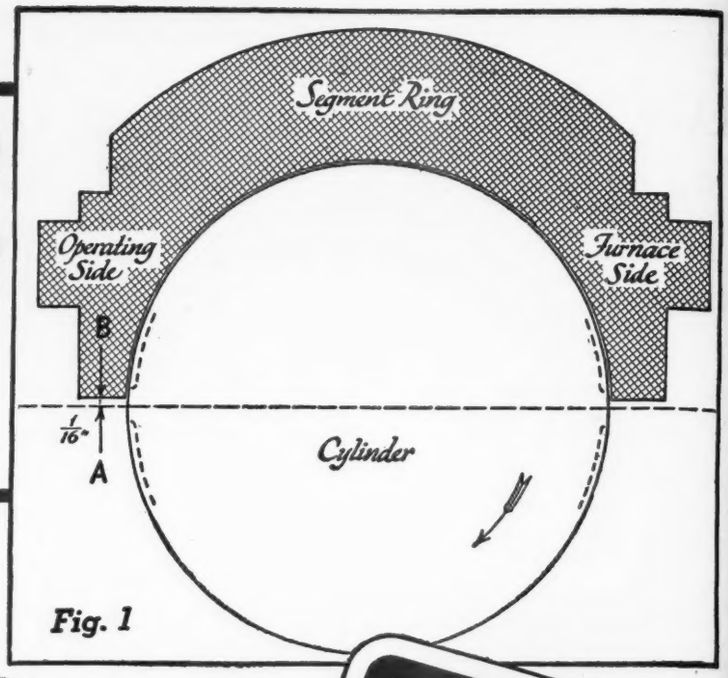

Fig. 1

To re-set cylinder correctly:

1. Determine how much cylinder is out of alignment. Measure distance from center line of cylinder to end of segment ring (A to B, on Fig. 1). Correct distance should be 1/16".

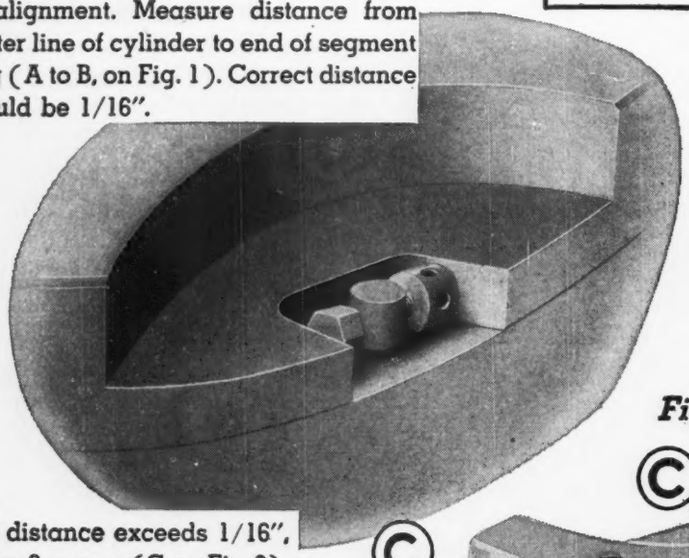

Fig. 2

2. If distance exceeds 1/16", loosen 6 screws (C, on Fig. 3). Then adjust Geneva Stop (Fig. 2) in the direction *opposite* rotation of cylinder, by approximately *one-third* the amount of error.

Note: If Adjusting Screws or Geneva Roll are damaged or worn, they should be replaced. Replacement parts are promptly available from stock.

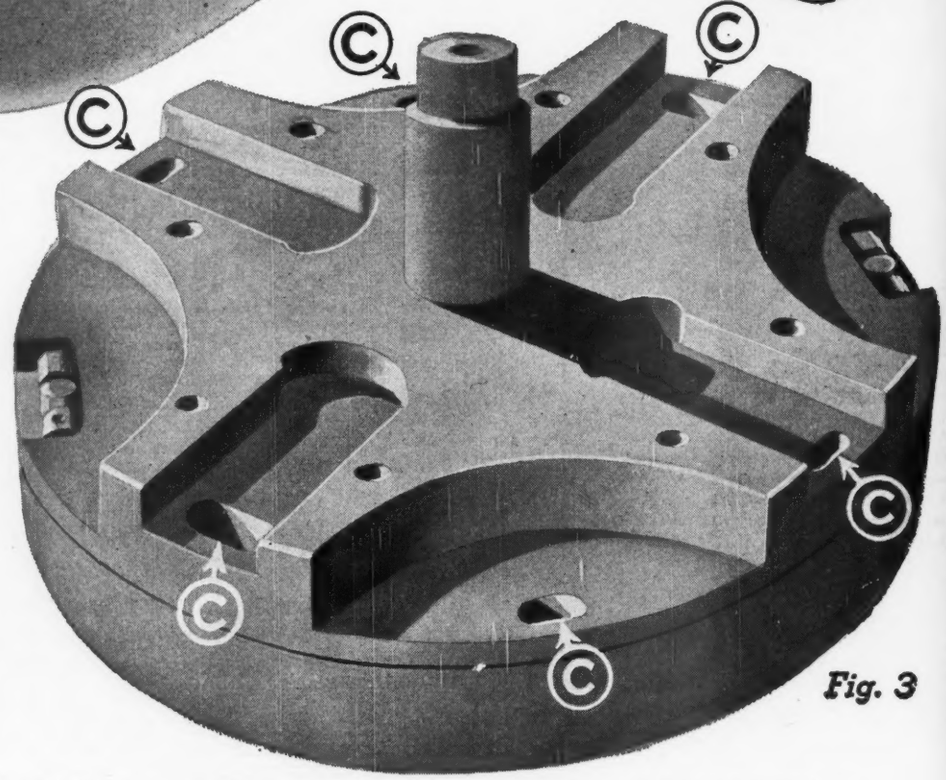

Fig. 3

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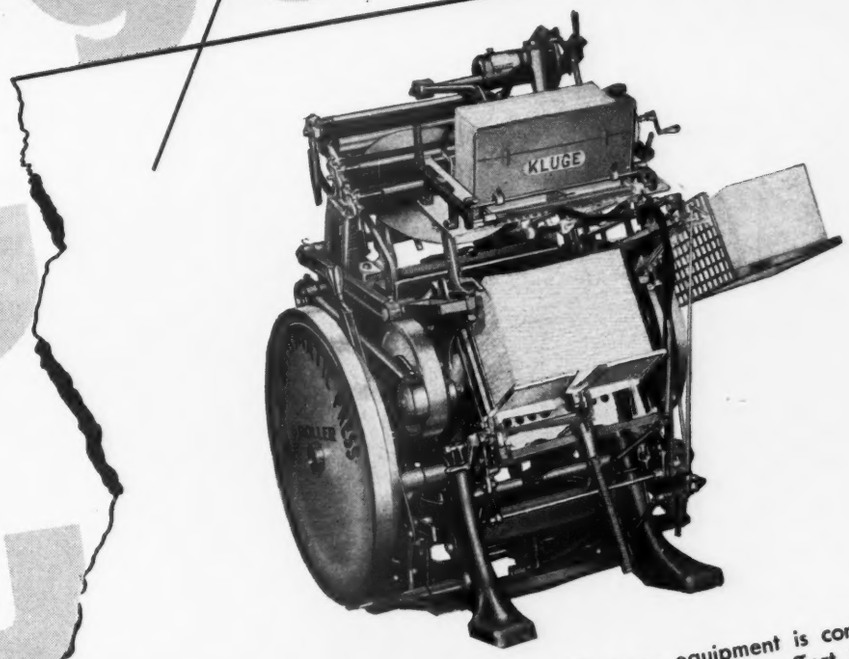

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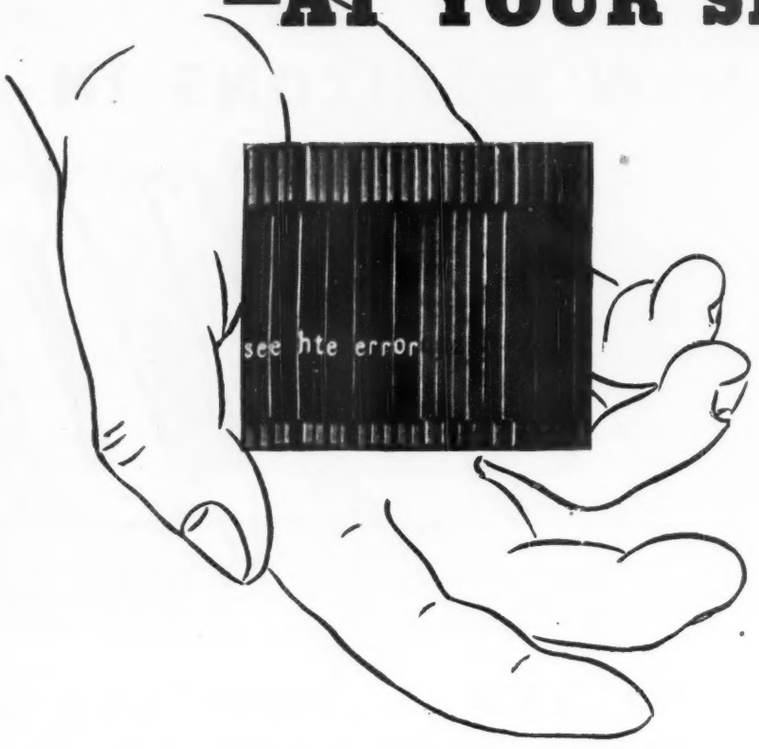

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GPO's
AWARD OF MERIT
for Printers

COMMERCIAL printers who have done and are doing essential printing for the Government Printing Office during the war will be pleased to learn that Public Printer A. E. Giegengack has announced an award which will be presented by the GPO to firms within the Graphic Arts industries and to suppliers of paper, equipment, and material in recognition of meritorious service to the Government during the war period.

While it is freely admitted that successful prosecution of the war could not very well be sustained without the valuable services rendered by the Graphic Arts Industries, yet the powers that be have not seen fit to recognize them other than in a quasi-official form. Printing equipment manufacturers, however, who have been making war equipment and material under contract, have been rewarded for their efforts by the bestowal of the Army-Navy "E" Awards, or purely Navy Awards. Manufacturers take these Awards seriously, as well they might. A considerable number of printing equipment and supplies manufacturers have received these Awards and suitable ceremonies have been held at the time of receiving them.

Printers doing direct Government war printing have been classified as service organizations, hence the eligibility requirements for the Army-Navy "E" Awards exclude printers from consideration.

The certificate shown in miniature form in the accompanying illustration, is 14 in. wide by 18¾ in. deep. It is set in Caslon Old Style roman and italic and is printed in two colors. It is stamped in gold to form a blue and gold medallion of Benjamin Franklin, bears the seal of the Government Printing Office and carries the signature of the United States Public Printer.

The body of the award is as follows: "Awarded in recognition and appreciation of the exceptional services performed for the United States Government Printing Office in the production of printed material essential to the Nation in the prosecution of the war."

Firms who receive the award will be given cards for distribution to their employees indicating their participation and cooperation in the war effort.

In announcing the new award, Public Printer Giegengack said: "I have felt for a long time that although printing is, in fact, a service, the industry is an incalculably valuable adjunct to the war effort. Our manuals, charts, training aids, maintenance forms, bombing tables and maps and a hundred other classes of work in the printing line have contributed directly to the high efficiency of our armed forces. Our miltary successes definitely reflect the cooperation that the printers have given to the Government since the very outbreak of the war.

"I am particularly pleased to announce the award by the Government Printing Office. It is my hope the industry will be stimulated to new efforts by the setting up of a plan to acknowledge their cooperation.

"I have appointed John J. Deviny, the Deputy Public Printer, as chairman of the awards committee. Other members of the committee will be Emmet I. Hill, Assistant Director of Commercial Planning; Daniel H. Campbell, Assistant to the Director of Purchases; and Allen F. Jones, Assistant to the Comptroller, all from the GPO."

Quantity of work accepted, percentage of performance, quality of output and the business standards of the nominee shall be the determining factors, each having equal weight of 25 points in the determination, but no firm will be eligible if its total rating is less than 70 points, provided also that it is not rated less than 10 points on any one factor.

CERTIFICATE OF
MERIT

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Washington, D.C.

Miniature reproduction of Award to be given by the Government Printing Office to printing firms in recognition of meritorious service to the Government during the war period.

The four factors for selection of printers and lithographers will be considered in the following manner:

1. Quantity of work accepted: (a) Forty per cent of total volume devoted to printing ordered by the Government Printing Office in any consecutive 12-month period subsequent to January 1, 1944, or (b) Less than 40% but in excess of $100,000 by volume or (c) Less than 40% but not less than $25,000 by volume and 60% of gross business for Government Printing Office, other Government agencies, or essential war printing.
2. Performance. Seventy-five per cent compliance with schedules with weight given to jobs delivered within 5 days of schedule and not more than 20% in excess of allowable time.
3. Quality shall refer to all phases of the operation for which the firm is responsible: typesetting, proofreading, makeready, presswork, binding, cutting, packing and shipping.
4. Business standards will embrace the cooperation of the contractor with respect to reliability, integrity, promptness in giving necessary information, compliance with contract and Government printing regulations, and maintenance of security requirements.

Nominations may be made by officials of the Government Printing Office and by recognized leaders in the Graphic Arts field who are familiar with the business operations and record of Government Printing Office contractors.

Nominations are now being received, and the Public Printer expects in the near future to announce the selection of several firms. The records of nominees are being reviewed as promptly as possible under present stress of business, he states. He also points out that this is being done in the order in which nominations are made and that the first awards are not necessarily to firms of the highest relative standing.

Letters of nomination and inquiries regarding further particulars of the award should be addressed to the Deputy Public Printer, Chairman of the Awards Committee, Government Printing Office, Washington, D. C.

Heads Consulting Engineering Firm

ANNOUNCEMENT was made recently by L. W. Claybourn that he had formed L. W. Claybourn, Inc., at 231 South LaSalle St., Chicago 4, Ill. This new organization of consulting engineers will specialize in multi-color printing processes and plate-making methods.

It is not surprising to those who know him personally that Claybourn was not content to remain Vice President in Charge of Operations for the J. W. Clement Co. in Buffalo with which firm he became associated in 1940. Claybourn's principal interests are in the field of research and development—particularly in the field of things which he feels can be improved. Therefore, his new venture in offering a complete engineering service to all persons in the Graphic Arts field, including buyers and sellers of volume printing, is of considerable interest.

The words, research and precision, are linked together in the minds of printing executives with the word Claybourn. Those who think in terms of the advancement of letterpress printing have heard Claybourn talk or have heard about him.

For many years, L. W. Claybourn earnestly pleaded that the letterpress printing industry improve its manufacturing methods. His faith has been pinned down to letterpress but he has never been satisfied that the process had reached a point where it is invulnerable to technological improvement.

It might be said that Claybourn grew up during that period when American industry expanded from purely local activity to the point where a manufacturer's business became regional or national in nature.

As American industry grew, it naturally follows that the printing industry also grew. Claybourn grew up with it. The increase in industry's manufacturing volume created demands for increased quantities of printing. Hence, a considerable amount of printed matter consumed by industry in general must be thought of in large quantity volume.

Claybourn thinks principally in terms of the mass production of multicolor printing. Irrespective of the size of the job, small or large, he was one of the first, if not the first, to insist upon manufacturing control with respect to dimension of *all* the elements that enter into the printing operation—type matter, spacing material, engravings and plates. He has spent the major part of his life in helping letterpress maintain its distinctly dominant role in the printing field.

He has had deep experience in the Graphic Arts. He has been inventor, manufacturer and printer—all the while being research conscious. These practical experiences fit him to head the new organization bearing his name.

DON'T NEGLECT CANCER

CLARENCE C. LITTLE, Sc. D.
Managing Director, American Cancer Society

NEVER before have we been so aware of the life saving power of scientific research. Out of the laboratories and on to the firing line where millions of our young men are risking their lives, have gone sulfa drugs, penicillin, dried blood plasma. From the past we can take the names of killers conquered by science — yellow fever, small pox, diphtheria, typhoid.

Today research against cancer stands on the threshold of new and great advances. It has already given us ways of producing and of controlling the production of the disease in laboratory animals. It has begun to give us knowledge of how cancer cells differ from normal cells.

But cancer research needs financial support and more trained workers. It must be given the material aid and security to make it efficient and increasingly powerful.

Never before have we understood so well how to organize for the detection of precancerous conditions or to identify cancer in its early and curable stages.

Few as yet realize the nature of the emergency which cancer presents. There are 17,000,000 living Americans who will die of cancer unless something is done. There are at least 5,500,000 of them who can be saved from death from cancer by simple, direct means.

You who read this are one of the "means" by which these lives can be saved. Learn the danger signals that may mean cancer and the ways in which the risk of cancer may be decreased. Pass this information on to others. Enlist during April in the Field Army of the American Cancer Society. If one of the danger signals appears either in your own life or in that of a friend insist on prompt fearless action. Go to your doctor for examination and advice.

Education alone can save millions of lives even if research does not advance. No one can afford to be too busy to negleot this challenge. It is a choice between intelligent protection cf yourself and those you love on the one hand, and ignorant risk of health, happiness and perhaps life itself, on the other.

The American Cancer Society has been for over 30 years the one great National organization devoted to study and development of plans for cancer control. It stands firmly on three fronts where it is face to face with the enemy—Research, Service, Education. It is going forward in support of all of these fields. It is going to take with it millions of Americans, who realize the great need and their power to help.

The American Cancer Society may have a division of its Field Army near where you live. If so go to it for free information. If it is difficult or impossible to reach a local division, write direct to the American Cancer Society, Empire State Building, New York 1, N. Y.

Executives . . .

in the mechanical or production departments of printing plants are invited to submit to the editor descriptions of production helps devised in their plants. These may consist of mechanical or electrical devices, or simply, ways and means for expediting production in the plant.

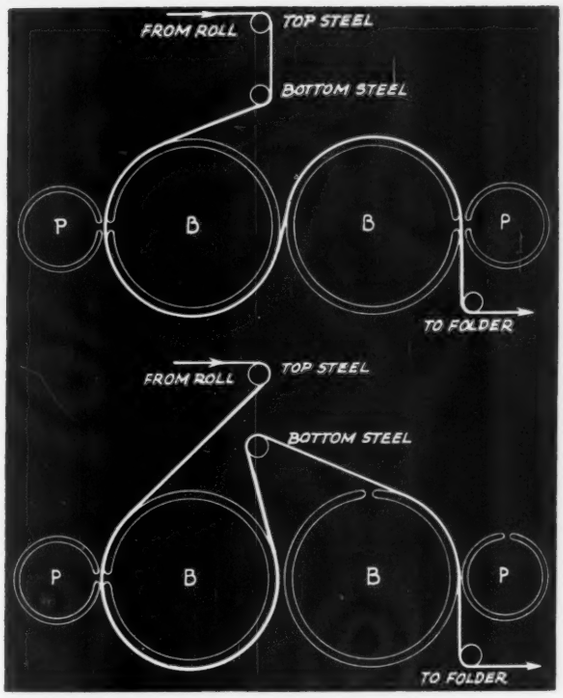
Many executives in turn have expressed their appreciation for these helps by passing along ideas developed in their plants.

Address MacD. Sinclair, Editor, *Printing Equipment Engineer*, 1276 West Third St., Cleveland 13, Ohio.

Buermann-Marshall Insure Employees

A group plan providing lift insurance and three forms of non-occupational disability benefits for employees has been adopted by Beurmann-Marshall, Inc., printers and lithographers, Lansing, Mich. The plan is being underwritten by the Metropolitan Life Insurance Co.

Employees receive $1,000 life insurance, non-occupational disability benefits of $17.50 a week in case of illness or injury, $5 a day when hospitalized and up to $150 for surgical operations. Employees also receive $4 a day when their dependents on whose account they are insured are hospitalized and up to $112.50 for surgical operations performed upon dependents.



Retiming Eliminates Slur On First Impression Printing

By F. C. FISKE*

**Press and Stereo Foreman, The Arkansas City (Kas.) Daily Traveler*

WE have been operating a 16 page Duplex Tubular press for the past 13 years. Recently, there has been some slur on the first impression printing. To overcome this condition, I retimed the impression. Since the impressions on the different units have been retimed, the first impression printing is approximately as sharp as that on the second impression. There is little or no slur at all.

To do the retiming, I took the slip gear off the second impression blanket cylinder, then turned the first impression plate and blanket cylinders 8 teeth ahead of the plate cylinder gear, or 16 teeth on the blanket cylinder gear. Then the slip gear was replaced.

In webbing the press, the web is taken off the top steel, down around the first impression, up over the bottom steel, then through the second impression, as shown in Fig. 2. Going up over the second steel takes care of the extra web between the two impressions and insures that the two impressions will be in good time.

Slur, of course, is offset from the second impression blanket. If the unit is overpacked and the tension of the paper roll is tight, and the split (gap) in the plates are both against the blanket while the press is running, there will be a back slip in the web if the folder pull is not equal, or keeping up, with the feed. In such instance, the print from the first impression is not falling in the same position as before. The result is that the small amount of ink left on the blanket causes a slur on the bottom of the print. On the other hand, if the packing is short and the folder is pulling hard on the web, the opposite effect will be caused—that of a slur upwardly from the top of the print.

Since retiming the impression as described above, there is a constant pull on the web with no slur.

On packing the impressions, I put 0.002 in. less on the first impression than on the second. There is no chance on a trifle overfeed. I can run any combination of pages from 2 to 16 at top speed and have had no web breaks from this retiming.

Comment

By WALTER OGDEN*

WHAT Mr. Fiske did to overcome slur was to turn the first and second impressions out of time with each other. Fig. 1. shows the press with plate gaps (splits) in time. Fig. 2 shows the plate gaps out of time. After adjusting the cylinders as shown in Fig. 2, Mr. Fiske compensated the first and second printings by going over the leading-in (bottom steel) rollers. In other words, he used the "breaking the stagger" method.

All newspaper presses are set up for quick plating with as few moves as possible. Thus, on a single-width press all of the gaps (splits) pass each other at the same instant. By breaking this gap, as Mr. Fiske has done, a more constant pull on the web is obtained. But the pressman also encounters plating delays. In addition, it will be necessary to remove the plates immediately the run is finished to prevent ghosting of the blankets.

A press registered as described will be productive of more web breaks unless the circumferences are kept pretty accurate. The reason for this is that instead of an intermittent pull on the web as it runs through the press there is a constant strain. Any inequality in the plates, or from weak newsprint will not get the intermittent relief from strain such as would be provided on a universally registered press. Printing results, however, for the same reason, should be better. It is a rule of newspaper press operation that the things done to improve legibility take away from running advantages, and vice versa.

**Pressroom Superintendent, The Cleveland Press.*

E. G. Hubbell (center), chairman of the Educational Commission of the International Craftsmen's Association, who also is Planning and Scheduling Manager of Meredith Pub. Co., Des Moines, Ia., addressed the Topeka Craftsmen's Club meeting in February. His subject was related to job planning and production control. At left is A. D. Rodell, President of the Topeka Craftsmen's Club. At right is Leland H. Schenck, Secretary and Production Manager of the Capper Publications, Inc. in Topeka.

Worker Motion

reduced to minimum in new plant of Monsen-Chicago composing room — Firm does typesetting and furnishes offset-lith reproduction proofs to armed services and for civilian production.

By A. G. FEGERT

TYPOGRAPHERS and printing executives will be interested in knowing how a former two-story brick garage, 100 ft. by 100 ft., at 22 East Illinois street, at Wabash avenue, Chicago, has been transformed into one of the most modernistic composing rooms built anywhere in the U.S.A. Building alteration was made possible by high priorities because of the company's contribution to the war effort. This trade composition and reproduction proof firm operating with 110 employees is now known as Monsen-Chicago. Until recently it was Thormod Monsen & Son, Inc.

From the Wabash avenue side, which is elevated in that area, the building is just ordinary looking. However, from the Illinois street side, where the entrance to the remodeled building has been placed, its modernistic appearance has been enhanced by the sign, "Monsen-Typographers" which is inscribed artistically on the curved wall. The outer flute glass doors open into a brilliantly lighted hallway which leads to the window of the glass-enclosed receptionist's room.

Much of the work produced in this plant is of a highly confidential nature because it is done for the armed services. It is not possible to enter the plant as casually as could be done in peace time.

If a visitor satisfies the receptionist that his business requires the attention of one of the company executives, he is permitted to enter the locked waiting room adjoining, with its fluorescent lights and comfortable arm chairs. Beyond that room to the east, are the executive offices and the general office.

Since readers of *Printing Equipment Engineer* are chiefly interested in the production facilities, description of the offices will be omitted in this account.

The stairway to the left of the outer entrance to the building, leads to the second floor with 10,000 sq. ft. of space, where the production work is done. Every part of that second floor is used for production purposes. The firm's products include typesetting and transparent-adhesive type proofs for maps and other war items, type matter and appropriate proofs for lithographers, advertising typography, and book and catalog composition.

EDITOR'S NOTE:

As time passes, printing executives are paying more attention to means for conserving employee footwork and motion in production departments. Straight-line workflow arrangement of equipment, of course, is extremely essential, but in itself isn't sufficient to secure maximum production. Motion conservation means in plant planning pays dividends.

One prime reason for conserving employee footwork is that in the printing trades hourly wage rates have increased considerably in recent years. Another reason is that the five-day work week in conjunction with six and seven-day plant operation of two or more shifts has made it definitely necessary to provide easy location of material in order to minimize lost labor time.

In the accompanying article about Monsen-Chicago's new composing room, it will be seen that every attention has been paid by the planners to "bringing the work to the man" so far as it can be done in the printing industry, and to provide means for locating material with the least possible resistance. If these things are worth consideration by a "professional" composing room, then they also should receive the attention of all composing room executives.

Printing Equipment Engineer believes the composing room described in the accompanying article and illustrations is worth serious study by all plant executives.

Fluorescent Lamps for High Visibility

The first thing that hits the visitor between the eyes as he emerges from the stairway into the square composing room —is the brilliant array of fluorescent

Key to Composing Room Floor Layout in New Plant of Monsen-Chicago, producers of Fine Typography

1 Superintendent's desk and layout department
- X Telephone
- Z Inter-communication office telephone
- M Monsen Type Manual—spread out ready for use without lifting
- K Rack on wall for type books of Intertype, Linotype, Ludlow, Monotype and other typesetters; cabinets below for storage of drawings, special proof paper, samples, etc.
- R Chute for old metal to drop downstairs for packing in drums to be returned to refinery.

2 Monotype keyboard room
- 2A Monotype keyboards
- 2B Monotype keybanks
- 2C Monotype keybars
- 2D Window and basket in which to put ribbons for casting

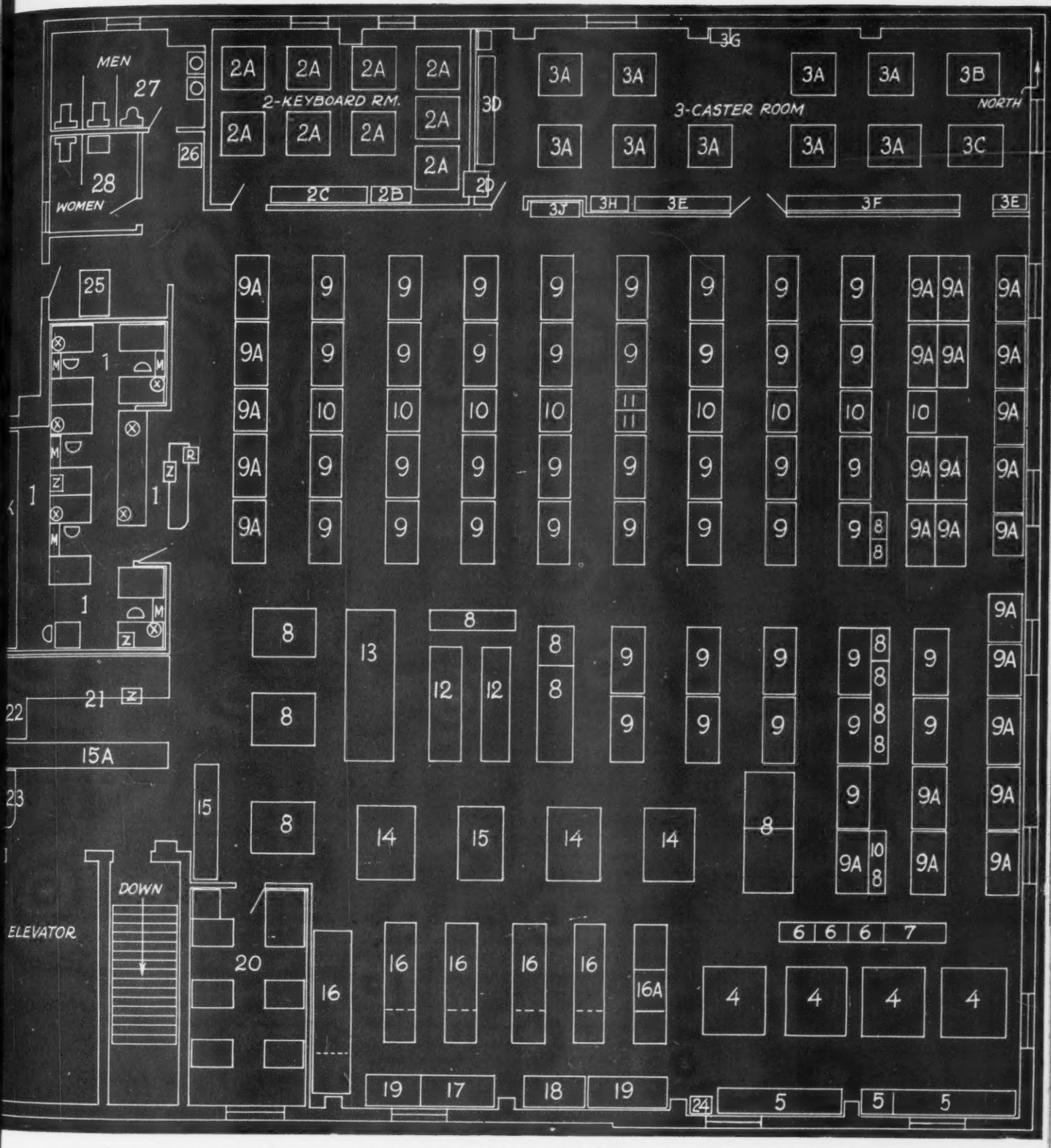
3 Monotype caster room
- 3A Monotype composition casters
- 3B Monotype Giant caster
- 3C Monotype material maker
- 3D Monotype composition mold and matrix case rack
- 3E Storage and workbench
- 3F Display mold and matrix case rack. (Under 3E and 3F are type cases which pull out into the composing room)
- 3G Lavatory
- 3H Galley proof press for pulling first proofs of Monotype composition
- 3J Rack where galleys of Monotype composition are placed from caster room and pulled out in composing room

4 Linotypes
5 Magazine racks
6 Galley dump and storage
7 Galley proof press
8 Galley storage
9 Type cabinet and work tops
- 9A Type cabinets with flat tops

10 Saw-trimmers
11 Mitering machines
12 Composition proof presses with paper cabinets
13 Composition proof press for full newspaper page
14 Steel top imposing stone with galley racks and furniture below
15 Chase racks for foundry forms
- 15A Chase racks for foundry forms with delivery table on top

16 Reproduction proof presses with materials cabinets and shining tables
- 16A Work table

17 Proof dryers
18 Reproduction proof dusting cabinet
19 Tray cabinets for transparent reproduction proof presses
20 Proofreaders' room (acoustically treated)
21 Receiving and delivery
22 Scales
23 Seat for errand boys
24 Lavatory
25 Mitre room for wood only with exhaust fan to keep sawdust from going into composing room.
26 Drinking fountain
27 Men's toilet
28 Women's toilet



lights which are hung in profusion over type cases, stones, proof presses and other machines at varying heights. The general illumination of the large room and the several rooms that line the west, north and south sections is excellent, and in no place is a shadow visible.

Another general glimpse gives the observer an impression of the uniformity of arrangement of the type stands—ten rows of them running north and south filling the open floor space. In the middle of each row of four type stands is either a saw-trimmer, or a mitering machine, so that the compositor is not required to leave his alley to work on such machines.

The floor of the composing room is made of cedar blocks.

Facing the elevator and stairway along the west wall is the combination receiving and delivery department. Adjoining it is the order clerk's desk. He makes out the job tickets which start jobs on their routes through the plant. Next, along the west wall, are the service men who see to it that copy and customers' instructions are properly transmitted to the production department, and near them is the plant superintendent.

The north end of the composing room, is devoted to the Monotype department, the nine keyboards and operators occupying one room and the adjoining room being occupied by the eleven casters and the operators. At the south end of the composing room, in the east corner, are the Linotype machines, and in the adjoining space is the battery of ten Vandercook proof presses—four for ordinary proofs, and six special Vandercooks used for producing the Monsen-Trans-Ad-Hesive proofs.

Filling the remainder of the available space at the south end of the second floor

is the proofreaders' room which is located diagonally across the aisle from the service department.

Specially Constructed Proofreaders' Room

The proofreaders' room with a capacity for six sets of proofreaders, is also enclosed so that sounds from the outside do not interfere with the hearing of the proofreaders and their assistants. Besides, the compartment of each set of two workers is partitioned part way up with acoustical treated Celotex wall-board so that within the proofreaders' room itself, the sound waves from one compartment are so broken up, that they do not affect the sound waves in any other compartment. Thus, each team of workers can talk in low tones and is enabled to hear each other distinctly.

In designing the furniture and equipment to suit the needs of the proofroom workers, provision was made not only for adjustable lights for the convenience of tall or short persons, but foot-bars under the desks were made so that they are adjustable for long legs or short legs.

"Make it easy and comfortable for people to work, and unconsciously they will increase their production," is one of the principles which caused the management to arrange things as they are.

The idea was expressed that if workers are required to shift themselves or their materials to become comfortable, the time lost making such readjustments, plus the annoyance of being uncomfortable, interferes with both the quantity and quality of their production.

Another idea that caused the management to increase lighting facilities and to place special labels of varying colors on typecases in the composing room was expressed as follows:

"Make it difficult for men to do the wrong thing; make it easy for them to do a thing right the first time they try."

Vari-colored Labels Identify Class of Type

The writer was attracted to the labeling method on typecases by a comment he overheard from a visiting executive to two of his associates from their large establishment—one of the largest in the United States—at the time Frederick Goudy was guest of honor at the recent house-warming.

"Look, here's an idea we can put into effect in our plant," said the executive to his associates. "A different color is used for each kind of type, and the italics are labeled in reverse type."

For example, green labels are used for Gothic types, the size and kind in each case being indicated with black figures. Red labels are used for roman types, black ink indicating the regular faces, while white on red indicates that the contents of cases are italic faces. Blue labels with black printing indicate bold faces, while with white printing, bold italics are indicated. Black background labels with white letters are used for script type.

Here is a photographic reproduction of the Honorable Service Button which is being issued to each individual upon his discharge from the Army, Navy, Marine Corps and the Coast Guard. The badge of honor, issued to those who served in the military or naval service of America after September 1939, is a gold-plated plastic dexter eagle perched in a ring. The War Department is anxious that every citizen recognize the button and its meaning when he sees it on the clothing of a discharged veteran. The War Department states that any veteran who has lost the button originally issued to him may obtain a duplicate at cost (7¢) by presentation of his discharge certificate to the Quartermaster Supply Officer at any post, camp or station, or by writing to the Adjutant General, War Dept., Washington 25, D. C.

Surplus Materials Segregated in Storage

Nowhere in the working areas on the second floor are surplus items visible since storage spaces are not provided on the production floor of the establishment.

On the lower floor is a group of individual store rooms, in each of which is kept material of the same kind. Unlike things are not placed in any one room.

Thus, in one room on the first floor, nearest the stairway, is a room in which type cases are stored containing faces of type that are not used oftener than a few times a year. Such stands of type are not permitted to occupy space in the working area of the composing room. However, because compositors are highly paid workers, the room in which these surplus type cases with type are stored is nearest the stairway. The reason is obvious, for the worker is saved steps in getting to it and thus spends the minimum amount of time going to and from that room.

Dead Metal Disposal

Another observation made in the composing room is that no where is a stationary hell box visible. In place of the usual hell boxes, with accompanying dead-metal overflowing onto the floor, are portable scuttle-shaped buckets—plenty of which are in all alleys and at the stones—into which dead metal is thrown. Part of the job of the porter is to move the buckets—on wheels—daily or hourly, to the chute at the west end of the room, and dump the metal, which drops to the first floor locked storage room. Several times a week the dead metal is packed in drums for shipment to the metal refinery where it is retoned, and comes back to the Monsen plant as new metal. In no case is metal melted and used more than once in the Monsen typesetting or material casting machines.

"Why don't you use metal more than once?" asked the interviewer of Myron Monsen, Sr.

"Whiskerless" Proofs

The answer was that most of the type is used for type forms from which transparent proofs are pulled for use by lithographers, and impressions must be so clear-cut that no "whiskers" are on them. In precise war-map work this requirement is more essential. It is Monsen's ability to produce "whiskerless" names of all cities, towns, hamlets, rivers, mountains, elevations and other items placed on war maps by means of transparent, adhesive type proofs, that the business has become one of high essentiality in the estimation of the war and navy departments. Consequently, the plant had to be doubled in size recently, and getting building materials required priorities. In no case, however, did contractors resort to black markets to obtain needed materials.

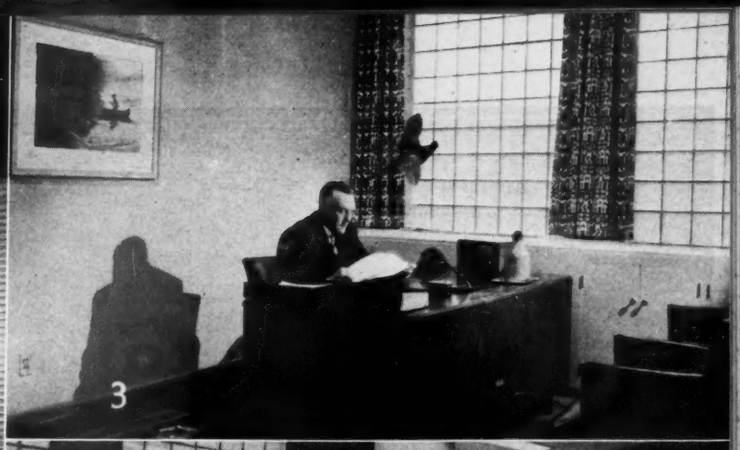
Sound-proof Monotype Room

A distinctive feature of the Monotype keyboard room of the Monsen plant is that its walls are lined with acoustical celotex material which breaks up the sound waves, so that the clatter of the keyboards—nine of them—does not disturb the persons working in the large composing room outside of the enclosed space; nor does the deadened noise affect the persons working at the keyboards themselves. It is also the plan of the management to line the walls of the caster room with noise absorbing material so that sounds from that individualized room will be deadened. Eleven Monotype casters are operated in that room.

Since compressed air is used in the operation of both Monotype keyboards and casters it was interesting to be told that the air flowing into and through the machines is moistless, it being devaporized by a device which was developed for that purpose after observations had been made in a war production plant with which the firm has business relations.

Clean Dry Air for Monotypes

Here's how the air is compressed and cleaned: Two Curtis compressors located in the boiler room in the basement, equipped with automatic valves are controlled by means of stop and go buttons in the Monotype casting room. The air going through the compressing process gets heated and must be cooled by use of water which flows through an Adams Pipe Line After Cooler. The heated air from the compressor flows through tubes in the opposite direction from which the cooling water flows through parallel pipes. When the air goes through the separator, dew drops and particles of oil are ejected from the air, and then the clean dry air flows into a receiving tank which is kept at 30 lbs. pressure. From



Views in New Plant and Offices of Monsen-Chicago, Typographers. This plant has been planned scientifically. Every facility for smooth flowing production has been installed. The lighting is excellent. A study of the key numbers in connection with the floor plan diagrams on other pages will show several innovations in production control and technique.

1—Superintendent's desk and Layout Department. From left to right are shown: Gordon Monsen, William Smetena and Superintendent Peter Paul. The two doors at lower right section of the cabinet around which these executives are conferring are used to dump waste and dead metal into a chute to the floor below. The accumulated metal is packed in drums for shipment to the refinery.

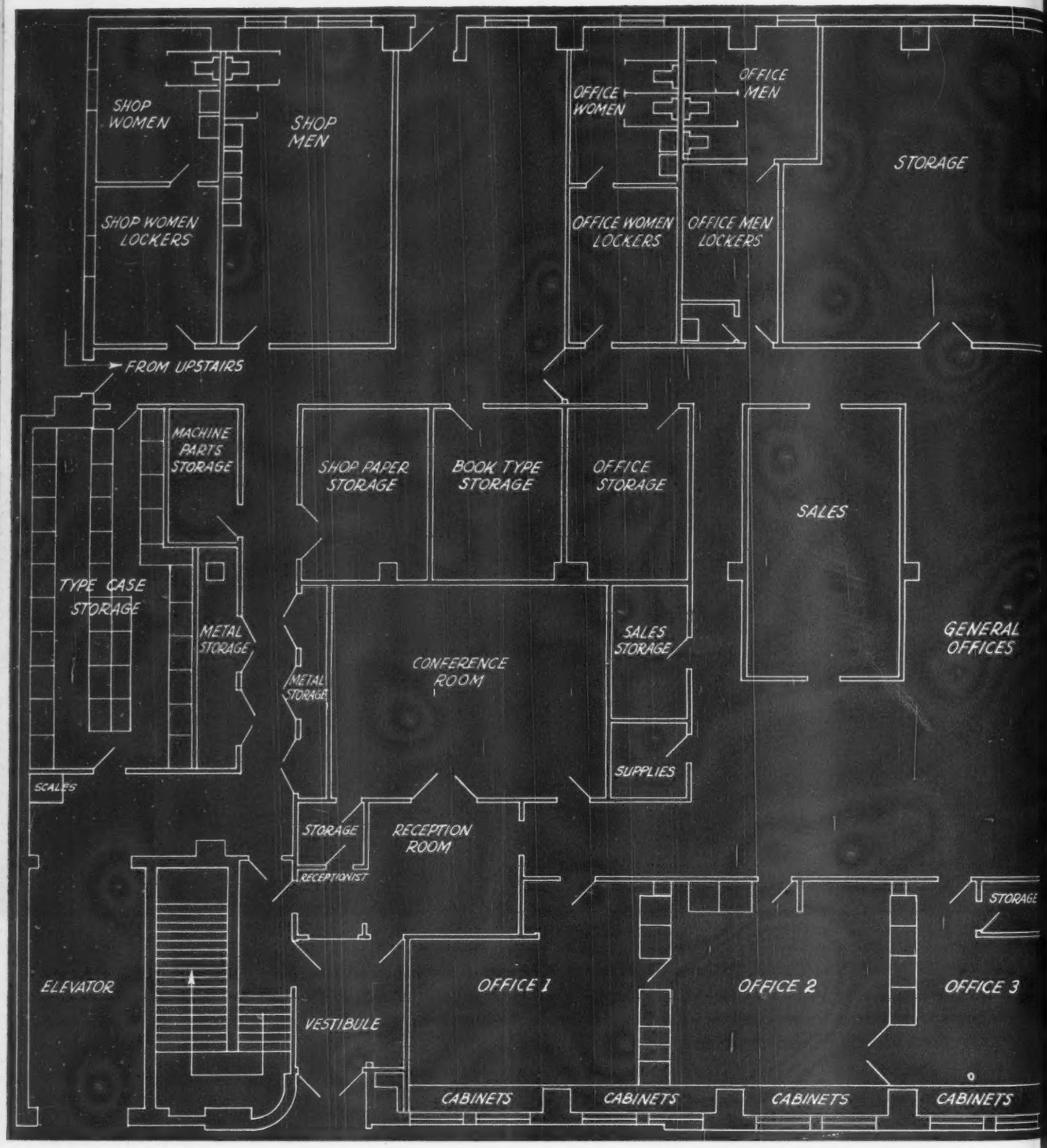
2—Across-the-floor view in hand or assembling section of the composing room. While this photographic view does not do justice to the excellent lighting facilities, yet the room is brilliantly lighted with respect to worker seeing tasks. For necessary trimming operations, a number of saw-trimmers and mitering machines are centrally located in each row of work tops to conserve footsteps. Everything needed in the way of slugs, rules and spacing material is contained in racks and cabinets near the worker.

3—Private office of Myron Monsen, sr. Note doors for concealed cabinets in wall space

4—Private office of General Manager Myron T. Monsen, jr.

5—View in transparent and black-on-white proofing department. These five presses are kept busy turning out reproduction proofs. Altogether, ten proof presses are used, two for galley proofing direct from the machine, three for letterpress proofing, and five for reproduction proofing.

Mechanical and Production Executives—While the return to peacetime activities is definitely in the future, you should plan that new plant now. This article about Monsen-Chicago will be informative to you.



First Floor Plan of Monsen-Chicago. This firm produces trade composition, typography and reproduction proofs for platemaking processes.

As will be seen upon looking over the plan, this floor is used for business offices, a conference room comfort stations for employees and storage rooms for the various items used in the company's production operations.

Along the wall elevation fronting the three offices, Nos. 1, 2 and 3 (marked cabinets) are concealed cupboards in which are stored the infrequently used but nevertheless necessary things. Between the offices likewise are concealed cabinets for storing articles necessary to the operation of the offices. The doors to these concealed cabinets form part of the surrounding wall.

In order to make easy the replenishment of supplies when needed, the several kinds of supplies are segregated in individualized rooms. Thus, the machine parts storage is in a room by itself; infrequently used type faces (a composition house must carry a full line of type faces) are segregated in a room arranged specifically for the purpose. Even the proof and wrapping papers are contained in a separate room. Notice the arrangement of the two metal storage spaces with double swinging doors to facilitate the loading and unloading of metal.

there the air flows through a pressure regulating valve set at 19 lbs. which enables the keyboards and casters in the Monotype room to be operated at a constant air pressure without having any moisture go through the machines. Thus the machines are freed from corrosive or clogging elements.

Peter Paul, general superintendent of the Monsen plant said that in 24 hours operation of the plant more than a gallon of water mixed with oil is removed from the compressed air system. This waste water and oil is ejected from the pipes into a sewer in the basement. Mr. Paul said that some of the visitors at the plant who have learned about the method of using clean dry air in the Monotype system indicated they would likewise install such a drying and cleaning device in their own plants.

Planned Storage —"Trick" Cabinets

The principle worked out in the system of storage or surplus material is that no room shall contain more than one kind of thing.

"When you store unlike things together in one room, your employees lose time looking for them, and they cannot be sure they have not missed the items sought," is one of the reasons why individualized storage rooms have been designed.

As already has been indicated, the storage rooms were arranged as to accessibility in accordance with wages paid to employees who are expected to use the storage material in the Monsen plant. The room nearest the stairway on the first floor is stored with rarely used type cabinets; the metal storage is next to it—a room 4 ft. by 20 ft.; the book page type forms stored for customers and charged to them on the basis of cubic feet required is 12 ft. by 15 ft.; spare parts items are stored in a room, 12 ft. by 6½ ft.; wrapping paper and containers for shipping are stored in a room 15 ft. by 11 ft.; office supplies are in an adjoining store room of the same size.

The same storage principle is followed in the offices. Things that are used occasionally are not visible but are behind "trick" cabinets[1] which are part of the walls or partitions.

War Map Inspection

In the private office of Myron Monsen, Sr., a small storeroom is equipped with ultra-violet lights and adjustable shelves. In that room, war maps either printed with fluorescent inks or on fluorescent paper—recently developed—may be examined under conditions comparable to those in a modern airplane bomber. It is for maps used by bombers that much of the Monsen type matter is set, and adhesive, transparent proofs made therefrom are delivered to the various map makers to affix in the proper places on maps prepared for lithographic reproduction, not only in this country but at battle fronts. Most of the experimental work of making type impressions on cellophane was done by Mr. Monsen.

An arrangement was made several years ago by which Vandercook & Sons started manufacturing special proof presses for this work. At that time part of the Monsen system was released to the Vandercooks for general use in the industry. However, much of the technique recently developed is still part of the "military secret" of the Monsen operation.

Building Features

Throughout the plant, prismatic glass blocks are used instead of ordinary window glass. These bricks are so arranged that sunlight is deflected downward by the upper tiers of bricks, and the rays are deflected upward from the lower tiers, thus diffusing the light to the best advantage for persons working within the offices or plant.

The offices and plant are ventilated by a Carrier system. Unit heaters are so adjusted near the ceilings that the fans blowing warm air into the various rooms during the heating season are thermostatically controlled. It is the plan of the management to install a complete humidifying and air conditioning system in the future both for the offices and the plant. In the event that a complete air conditioning system is installed in the composing room, another ceiling will be built in the composing room.

While much additional work is to be done to put the plant in the condition which the management has planned, thus far the owners of the building and the Monsens have spent in the aggregate $100,000 for rebuilding the structure, and installing new equipment among which are eight of the newest Vandercook proof presses.

How the management obtained high priorities to make building alterations and obtain the needed new equipment for enlargement of the Monsen production facilities, is a story in itself. Weeks of time were spent in Washington, D. C., and a lot of diplomatic negotiating was done with Chicago administrators of the various bureaus. However, all necessary priorities were obtained with the aid of the users of Monsen's products in high places in the army, navy and air forces.

Firm Established in 1887

The Monsen-Chicago business was established in 1887, by Thormod Monsen, who started to set type for lithographers, and also did job work. Myron, Senior, became connected with his father's business in 1902, at which time the name was changed to Thormod Monsen & Son, and after a few years it was incorporated. The firm now is operated as a partnership, two sons of Myron being in the firm, Myron, Junior, who is general manager; and Gordon,—a lithographic expert—who is in charge of the service department.

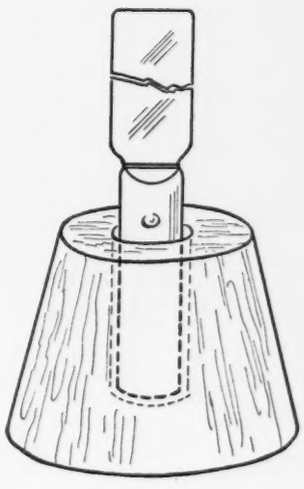
Peter Paul, superintendent of the plant, who is financially interested in the business, has been with the Monsens for more than twenty-five years. Harold English who had much to do with the modernistic design of the offices, and the working out of the general plans with the architect, has been with the firm two years and is assistant general manager, and also is in charge of sales to publishers.

Mr. English reports that the results achieved in transforming the old garage into "one of the finest composing rooms of modern times" is due to the team work of all of the executives of the company, plus a lot of help from employees and outsiders.

Mr. Monsen, Sr., remarked that the blue prints finally used by the contractors represented the tenth revision in arrangements before all persons concerned were satisfied.

U. S. Press Grows in Influence

The new 1945 edition of N. W. Ayer & Son's Directory of Newspapers and Periodicals shows continued growth of circulation during the year just passed for both newspapers and magazines. A new all-time high circulation figure of 47,004,019 was reached as a *daily* average by morning, evening, and all-day daily newspapers of the United States, illustrating the high standing enjoyed by the newspapers with their readers.



Ink Knife Holder

What to do with the ink knife between times when it is not being used has been disposed of readily by Henry Hefti, Secretary of the Athens (O.) Printing Pressmen's Union. Simply, one of the wooden core pieces from a roll of wrapping paper, was utilized to make a fine holder for the knife.

[1]Editor's Note—*The concealed storage cabinet idea employed in the Monsen-Chicago plant, it seems, is the answer to the greatest cause of untidiness and accompanying irritation. Everybody, naturally, is inclined to neatness. But what is one to do with the many infrequently used and detached things which must be kept at hand? In the January 22 issue of* Life *appeared an excellent illustrated article on concealed storage. While the article was devoted to utilizing walls in a home for storage purposes, the same principle can be applied to any printing plant—offices or production departments.*

Navy to Present Award to Printers and Lithographers

THE Navy Department has created a special commendation award to be presented printers and lithographers qualifying for it by producing essential printing for the war effort. Printers and lithographers have not been eligible for the Army-Navy "E" Awards, because of the service nature of their work, and the Navy has decided that each firm qualifying for Navy recognition for its war service should receive a commendation award with each employee of each such firm under present intentions receiving a miniature reproduction of the award saying that the employee, by name, aided in the company's war effort and helped to win the commendation.

Under Secretary of the Navy Ralph A. Bard will sign the commendations, which will read: "United States Navy, Executive Office of the Secretary. For outstanding performance and service rendered to the United States at war, this commendation is awarded to the management and employees of (Name of Company)."

It is further intended to have this award reproduced in miniature, probably pocket-size, in a double folder with the award reproduced on one of the inside panels and the other inside panel to carry the notation "To (name of employee) whose aid in this company's war effort helped to win this commendation." One of these miniatures will be given to each employee of the company at the time of the award.

The basis of selection for awarding this commendation will be as follows:

(a) The company receiving the commendation must be producing the majority of its work for the war effort.

(b) No company producing less than 50% of its total volume of work for the war effort will be eligible for the award. Thirty-five % of its work must be for the Navy. This percentage should have held for six months prior to the award. Definition of Navy War Work: Work done directly for the Navy; through the Government Printing Office for Navy; or on subcontract to supplier for Navy. The same applies for work done for the Coast Guard and the Marine Corps.

(c) The commendation is awarded for "outstanding performance" and only those plants will be considered which have performed exceptional service in the following:

(1) Management Cooperation: The extent to which the management cooperated with time, effort and facilities in these trying times.

(2) Time Element: Refers to the adherence to schedules, meeting of obligations concerning proofs, delivery, etc.

(3) Accuracy: Thoroughness of proof-reading, cleanliness of proofs and general interpretation of instructions.

(4) Quality of work: Special attention to production details, typography, presswork, bindery and general appearance of finished job.

(5) Security (when applicable): Observance of security maintained by a printing plant for the

Ink Trouble Chart Has Been Revised

IN the Tenth Annual Reference Issue of *Printing Equipment Engineer* we published the 1929 version of Fuchs & Lang's Ink Trouble and Remedy Chart for letterpress printers. With that chart were printed extended comments which were written because of the advances which have been made in ink manufacture as well as improved pressroom technique. *Printing Equipmen' Engineer* received many favorable comments upon the comments added to the 1929 form of the F&L Chart.

The Fuchs & Lang Mfg. Co. just recently published a modernized version of the 1929 Chart, approximately 21 in. by 14 in. size on heavy board. The new chart entitled *Pressroom Helps*, although primarily prepared to aid he lithographer, will be useful to the letterpress printer.

The chart contains a study of 25 common pressroom difficulties with a description of their possible causes and suggested remedies.

If you would like to have a copy of the new chart send your request to Robert J. Butler, General Manager, The Fuchs & Lang Mfg. Co., Div. of General Printing Ink Corporation, 100 Sixth Ave., New York 13, New York.

With the permission of Fuchs & Lang we are presenting the chart in the accompanying tables.

NATURE	IDENTIFICATION OF COMPLAINT—METHOD OF DETECTION	POSSIBLE CAUSE	POSSIBLE REMEDY
1. BACKING AWAY FROM FOUNTAIN	Ink does not follow fountain roller; print is light and dark in spots; cannot keep color.	1. Ink too short. 2. Not free-flowing enough.	1. If complaint is mild stir ink occasionally. 2. If complaint is serious add fairly good bodied varnish like No. 2, No. 3 or No. 4; if very serious replace ink.
2. BLEEDING	Light tint appears on unprinted parts of stock.	Ink soluble in water.	1. If trouble is mild add non-bleeding varnish. 2. Substitute ink that does not bleed in water.
3. CAKING (FILLING UP)	Screen filled in; fine work filled in.	1. Ink too short. 2. Too much ink run. 3. Ink too soft. 4. Ink too heavy. 5. Ink reduced too much.	1. If ink is good-bodied reduce with varnish No. 0 or No. 1. 2. Run less ink. 3. If ink is soft and soupy add varnish No. 5 or No. 8 or body gum. 4. Reduce less.
4. CHALKING (POWDERING)	Ink is dry but does not hold to stock on rubbing under pressure.	1. Not enough binder to ink for stock run. 2. Vehicle penetrates stock too much. 3. Ink too short.	1. Add long varnish or body gum. 2. Add good drying varnish like Overprint A-No. 1.
5. COLLECTING	Screen fills in, fine work fills in; Ink does not print solidly. Rollers pick dirt from plate and air.	1. Ink too tacky. 2. Poor stock. 3. Very fine pick. 4. Collection of dust in air or on stock.	1. Add wax compound No. 9899X. 2. Endeavor to keep air in pressroom freer from dust and floating lint. 3. Brush edges of stack of paper with stiff brush to remove lint.
6. CRYSTALLIZATION	Later colors do not take well on base colors. Subsequent colors can be rubbed off base colors easily.	1. Base colors do not penetrate stock sufficiently. 2. Subsequent colors do not set into base colors. 3. Base colors too dry. 4. Wrong dryer used.	1. Make base colors dry slower. 2. Make succeeding colors set and dry faster. 3. Use thin varnish in succeeding colors.
7. DISTRIBUTION POOR	Ink does not work out smoothly on rollers or slab; print is uneven.	Ink too heavy.	Reduce ink with a good working varnish like No. 0 or No. 00.
8. DRYING TOO FAST	Rollers get tacky; possible picking; poor, uneven print, which becomes worse with continued running.	1. Too much dryer in ink. 2. Too fast drying vehicles or pigments in ink.	1. Add non-drying compounds. 2. Add paraffine oil. 3. If too severe the ink should be replaced.
9. DRYING TOO SLOW	Prints smear—ink feels wet.	1. Not enough dryer in ink. 2. Too much non-drying oil or compounds in ink.	Add suitable dryer, depending on stock or length of run.
10. FADING OF INK	Print loses strength, changes tone and loses lustre.	Fugitive colors used in composition of ink. Too great reduction of ink.	1. Use colors faster to light. Consult your F&L representative about fast colors. 2. Use colors concentrated.
11. GREASING (SCUMMING)	Scum forms on plate. Hard to keep work clean.	1. Ink too short. 2. Too much compound or oil used.	1. Add long varnish. 2. Eliminate compound or short oil.
12. LIFTING POOR	Ink does not print evenly or smoothly. Piles on blanket in offset lithographing. Cakes on plate in direct lithographing and typographic printing.	1. Ink may be too heavy or too light thereby causing distribution difficulties. 2. Ink may not have sufficient binder to repel water. 3. Ink may be too fast drying.	Must diagnose trouble and treat accordingly. Addition of proper grade of varnish most likely to remedy matters.

production of classified material, confidential and secret matter for the Navy.

In the desire to have the award symbolic of fine craftsmanship, the Publications Division of the Navy Department commissioned Bruce Rogers, designer and typophile, to handle the design of the commendation award certificate.

The company award is size 13½ in. by 12 in. A border of golden rope with four eagles in the corners lends a nautical flavor to the certificate while the message and seal are printed in Navy Blue ink. The legend "United States Navy" is set in Erbar while the rest of the copy, including the imprint of the recipient, is done in Eve Heavy.

Announcements will be made in the near future concerning the selection of printers who are to be so honored for their outstanding efforts on behalf of the Navy. Further particulars may be obtained by the industry from the Director of Publications, Administrative Office.

BOOKS

RECEIVED

Inking System for the Offset-Lith Press

THE fifth in its new series of Shop Manuals has been issued by the Lithographic Technical Foundation. This pocket-size volume of 32 pages is Shop Manual No. 5, *Inking System for the Lithographic Offset Press.*

Like others in the same series, this manual is designed for quick and easy reading in simple shop language. It is especially recommended as a refresher and reference guide for the qualified journeyman operator, for the apprentice or press assistant as a means of increasing knowledge and familiarity with the inking system.

Shop Manual No. 5 embodies simple and understandable diagrams of the offset press and identification of the inking system parts. It deals with a description of these parts, adjustment and setting of parts, testing of forms and rollers, setting the ink form rollers, the ink fountain blade and the ink fountain, judging ink film and other essential factors to quality ink performance in operation.

The benefits of Foundation work are being spread to a much greater extent than in the past through the medium of the Contributing membership, how held by many individual keymen and employees of member plants of the Foundation, reports Executive Director Wade E. Griswold of the Foundation. The Foundation points out the advantages to be gained by lithographers and related industry establishments which take out membership now. Complimentary free copies of all publications, research bulletins, technical papers, shop manuals and educational texts are mailed as they are produced and made available.

NATURE	IDENTIFICATION OF COMPLAINT—METHOD OF DETECTION	POSSIBLE CAUSE	POSSIBLE REMEDY
13. MOTTLING	Print "pebbly" and is not smooth; shows more ink in some spots than others.	Improper consistency or construction of ink. Too much body causes a dry looking mottle; too soft an ink gives a squashy, smeary, mottled print.	1. If too much body, add small amount thin varnish or paraffine oil. 2. If ink is soft and smeary, add long varnish or body gum. 3. Earth pigments may give a mottle that cannot be helped by manipulation.
14. NOT PRINTING SHARP ENOUGH	Slur on edges of print; lack of detail; fine work is not clean enough.	1. Ink too short. 2. Work may be worn away by poor working ink. 3. Body of ink soupy.	1. Improve body of ink. 2. Eliminate greasy materials. 3. Add body gum.
15. OFFSET	Part of ink sets off on back of next sheet.	1. Ink sets too slowly. 2. Paper is too hard. 3. Too much ink used. 4. "Static" in stock.	1. Add quicksetting compound. 2. Use a stronger ink and run sparer.
16. OXIDIZING OF STEEL ROLLERS	Inking rollers are either partly or entirely stripped of ink and do not take ink from fountain.	1. Ink is too short and not water-repellent enough. 2. Too much acid in dampening water. 3. Ink run too spare.	1. Make ink longer and with more body. 2. Reduce color strength to allow running more ink on rollers.
17. PICKING	Large or small particles of paper are torn off. Particles collect on plate and print.	1. Too much body to ink. 2. Too much long varnish used. 3. Ink dries too fast. 4. Coating of stock poor.	Reduce ink in quickest possible way with the thinnest possible non-evaporating medium.
18. PILING	Ink collects unevenly and to excess on plate, rollers, blanket and possibly on prints.	1. Poor body of ink. 2. Ink generally too short and not water-repellent enough in case of litho process with result that ink becomes putty like and piles. 3. Ink too heavy. 4. Too much dryer in ink.	Make ink longer and with more body. If body too heavy, reduce with good working varnish No. 00, No. 0, No. 1, or No. 2, or Laketine.
19. SMEARING	Impressions not sharp; edges of print are slurry; generally bad offset.	1. Ink too short and tackless. 2. Too much ink run.	1. Run less ink. 2. Use better bodied ink and add long varnish.
20. SMUDGING IN FOLDER OR CUTTER	Ink not thoroughly dry. Ink does not adhere to stock firmly enough.	1. Not enough dryer in ink. 2. Not enough binder in ink.	1. Add more dryer. 2. Add either a longer varnish to ink, or a good holding, hard drying gloss varnish like Overprint Varnish.
21. STICKING OF SHEETS	Sheets stick solidly together; sheets stick partially together and tear as separated.	1. Too much gloss to ink. 2. Inks do not set enough into stock. 3. Too much ink run. 4. Too much dryer in ink.	1. Run less ink. 2. Add setting compound. 3. Use less dryer. 4. Use shorter varnishes.
22. STRIKING THROUGH	Oil from ink shows on back of printed sheet. Part of ink shows through sheet.	1. Too thin an ink. 2. Too penetrating an oil in the ink. 3. Too much ink run.	1. Do not use penetrating oils. 2. Use less ink. 3. Use better-bodied ink.
23. WASHING	Tinted scum on unprinted section of sheet.	1. Ink too short or soft. 2. Ink broken up by too much water or too strong acid in water; (not due to water-soluble pigment in ink).	Often confused with Bleeding and Tinting. Use longer varnish or better-bodied ink.
24. WEARING OF LITHO PLATES	Work becomes dim, not clear. Impression becomes hazy and lacks strength. Fine parts of work wear away entirely.	1. Ink may be poorly ground. 2. Over-pressure. 3. Poor transfer. 4. Too much acid may be used to cut down greasiness.	1. If ink is too short add long varnish. 2. If too stiff, reduce cautiously with litho varnish.
25. WORKING TOO SHARP	See "Wearing of Litho Plates" (24).	Ink is too tacky.	Reduce cautiously with soft litho varnish.

To Conduct Study of CHROME DERMATITIS Among Lithographers

The Lithographic Technical Foundation announces that it has enlisted the assistance of the Kettering Laboratory of Applied Physiology in Cincinnati in its study of chrome dermatitis. Dr. Leon Goldman, staff dermatologist at Kettering, has already begun susceptibility tests on patients at the Cincinnati General Hospital, using various lithographic solutions and solvents.

As the name—chrome dermatitis—indicates, solutions of chromium salts are usually held responsible for the skin irritations encountered in the graphic arts industry. However, chromium is not the whole story. While it has been shown that chrome salts and solutions can cause dermatitis in susceptible individuals, it is also possible for workers to develop dermatitis from exposure to other materials used in the graphic arts: solvents and cleaners, developers and intensifiers, glues, pastes, and inks. As a result of experiments several years ago the Lithographic Technical Foundation, while not absolving chromium of all responsibility for the ailment, concluded that turpentine presented a greater hazard than chromium salts in lithographic shops, and it developed Lithotine as a substitute. The use of Lithotine has been accomplished by a marked decrease in skin irritations among lithographers.

Eastman Kodak Company is cooperating in this study of chrome dermatitis by providing the services of Dr. James Sterner, Eastman's industrial health specialist, as consultant.

Fig. 1

How to Count Revolutions Without a Speed Counter

By W. F. SCHAPHORST, M. E.

A SPEED counter is not always an absolute necessity for determining the speed of a motor, spindle, shaft or other rapidly rotating machine part. Speed can be counted "by hand" in several ways, for example as follows: Attach a long thread to a lead pencil as indicated in Fig. 1. The pencil should have a rubber eraser on one end preferably. Press the eraser against the end of the shaft in the same way that a regular speed counter is used, bearing against the point of the pencil with a piece of hard wood or metal to provide a spindle bearing, and the thread will wind on the pencil as the pencil revolves.

At the end of a predetermined suitable time, 5 sec. or thereabouts, remove the pencil and count the number of turns of thread on the pencil. It is then a simple matter to compute the revolutions per minute. Thus if you have had the pencil winding the thread for 6 sec., multiply the number of turns by 10 and the answer is the number of revolutions per minute.

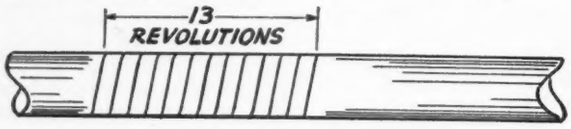


Fig. 2

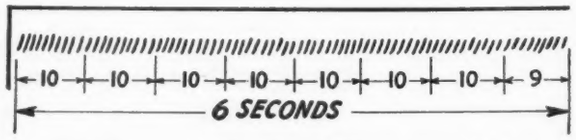


Fig. 3

Again, if conditions are such that the machine or shaft can be stopped, temporarily, a simple way to count the revolutions is to run a lead pencil lengthwise of the shaft, for a period of 5, 10 or more seconds, making a mark on the shaft during that period as indicated in Fig. 2. The marks made, of course, will take the form of a spiral, but all that is necessary is to count the number of turns made during the test period and then compute the revolutions per minute, which is readily accomplished in the manner as already explained. At the end of the day's run, therefore, it will be possible to count the revolutions made during any period of the day. If the shaft is a long one it can be made to register the speed during any hour or every hour, serving as a sort of "recording chart".

Another effective and simple method is to file a nick in the end of the shaft and run a piece of cardboard or paper along the end of the shaft against its edge. A series of marks will be made on the paper as shown in Fig. 3, and by timing the operation and counting the number of marks it is a simple matter to determine the speed of the shaft. Even if the speed is 3,000 r.p.m. or more, it makes no difference with this method. In some ways, this method is preferable to that of using a regular speed counter. For example, this record shows 79 marks made on the paper in 6 sec. It will be noted that the marks are divided into groups of 10 to facilitate computing and to guard against error. "Divide the number of seconds into 60 and multiply by the number of marks", is the rule that applies to this and to all cases explained above. 60 divided by 6 equals 10. 79 x 10 equals 790. Therefore the shaft makes 790 r.p.m.

There are many ways in which problems can be overcome that may appear difficult at first. A speed counter is generally handier to be sure, and one should be owned, if it is necessary to determine speeds often. But for special cases any one of the above mentioned counters will do very well indeed.

Abbreviated Meeting to be Held by Craftsmen

AS has been previously announced the Board of Governors of the International Association of Printing House Craftsmen has decided that this year's convention will take the form of an abbreviated two-day meeting to be held in Columbus on August 6 and 7. The meeting will be limited to 50 people, including attendance from Columbus. According to the announcement, each local club will be limited to one delegate. No other visitors will be permitted to register or attend any of the sessions. Each delegate can represent only his own local club.

International President Walter F. Schultz states: "It is earnestly hoped that Craftsmen will appreciate the situation that confronts our organization and cooperate to the fullest extent in helping us conduct a meeting that complies with government regulations.

"One of the major tasks to be undertaken at our International business meeting will be the revision of the Constitution and By-Laws. Each local club should have a committee to study our present laws and recommend changes and additions. After being approved by the club, such proposed legislation should be sent to L. E. Oswald, 619 W. 78th St., Wauwatosa, Wis., who will prepare it for consideration by the delegates. The sooner local clubs take action, the more it will expedite the work of this committee.

"In answer to a question that is in the minds of many district representatives and club officers, I would recommend that plans be made for district conferences wherever at all possible, limiting the attendance to 50 Craftsmen only, and that no other visitors or guests be permitted to attend. According to a ruling by ODT, the limit of 50 includes local attendance.

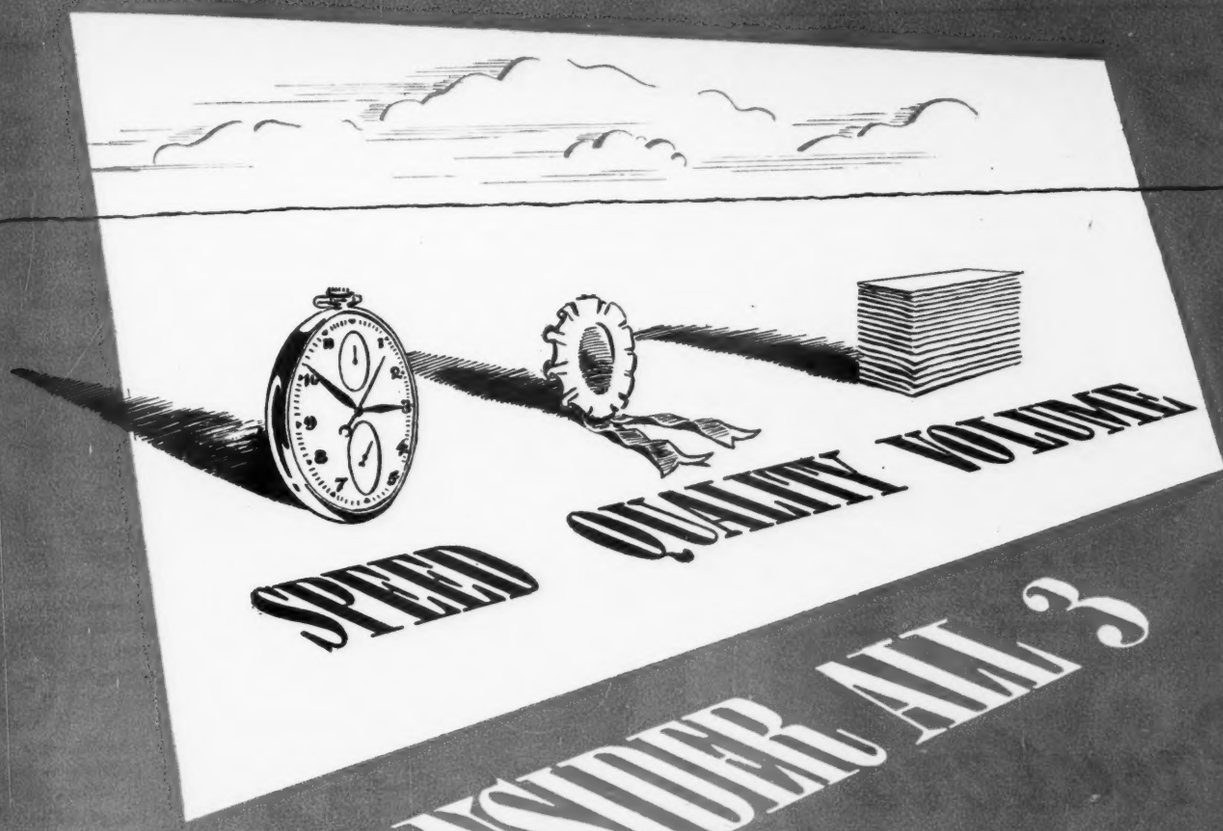
"While it is our intention to comply with every Government requirement, we feel that we should carry on every function vital to the object of our organization which is permitted by war time restrictions."

Plan to Expand Research

Plans for an expanded program of research on printing plates materials and processes were made by Printing Plates Research, Inc., research organization of the printing plates industry, at its Fifth Annual Meeting in Cleveland, Ohio, March 7-8.

To begin in the near future, the expanded program will involve investigations of the application of various scientific developments to printing plates manufacture. The work will be conducted at Battelle Institute, Columbus, O., laboratory site of the past and current work of the research group.

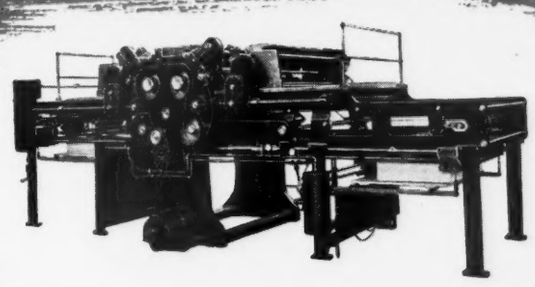
Officers for the ensuing year were elected at this meeting. Measures to cooperate with other Graphic Arts research organizations were passed. The officers are: Joseph Schwartz, Westcott & Thomson, Inc., Philadelphia, president; R. R. Myers, Capital City Printing Plate Company, Des Moines, Ia., first vice president; Sam Ross McElreath, Sam Ross McElreath Company, Dallas, Tex., second vice president; and J. Homer Winkler, Battelle Institute, secretary-treasurer. All were re-elected to offices held during the past year.



CONSIDER ALL 3

Printing profits are determined not alone by how long a run takes, nor how many sheets are delivered—nor even by how good those sheets are. All three should be considered as one.

Reports from users of the Cottrell 2-color rotary press show that its net production—*the number of perfect impressions* per hour—is greater than the *running speed* of any other sheet-fed units designed for similiar work.



C. B. COTTRELL & SONS CO.

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New York: 25 East 26th Street • Chicago: Daily News Bldg., 400 West Madison Street • Claybourn Division: 3713 North Humboldt Avenue, Milwaukee, Wis. • Smyth-Horne, Ltd., Chipstead, Surrey, England

R. B. Huddleston discusses present state of printing industry and its condition when peacetime comes. Says: "In the future printing is going to have to be sold."

Printers *urged to plan now for postwar business — Speaker suggests that creative printer specialize in specific market phase — Suggestions for handling future plans*

By ROBERT B. HUDDLESTON*

**Advertising Manager, American Type Founders. From address delivered before Cleveland Craftsmen's Club, March 1945.*

"THERE is now no more press capacity than there was three years ago, because for that length of time nobody has been making presses. Manufacturers are tied up 100% on war production. Yet, 20% of the advertisers responding to a recent questionnaire reported buying an average of 35% more letterpress printing than they did five years ago, and 43% of the respondents bought ⅓ more offset lithography. Furthermore, 80% of those replying claim they plan to buy still more printing after the war. While thinking about new products and advertisers, do not overlook the companies which have entirely forsaken civilian selling for war production.

"It is no exaggeration to say that reconversion of industry will have to ride on printing. Innumerable forms will be required to get the factories into production. Endless sales information will be needed and disseminated throughout merchandising channels. This will include even full-scale catalogs, since new models and prices and revisions of older models will have made prewar catalogs as obsolete as a dodo. This is all behind-the-scenes printing that must be prepared and produced before the consumers of peace-time products come into the picture. Lots and lots of printing will be necessary just to get the products off the assembly line or on the dealers' shelves.

"The first requirement for a prosperous country after the war is the existence of productive jobs for all who seek employment. Reduced to figures, this means making about 10 million more jobs available than were available in 1940. To provide these jobs, consumer expenditures for goods and services must be approximately 165 billions of dollars at 1942 price levels. This amounts to a dollar increase of 86% over 1939, but, because of a higher price level, the increase in physical production would be considerably less.

"Now, what can the printer expect in the way of an increase in his business with this greatly expanded national product? The Bureau of Foreign and Domestic Commerce of the Department of Commerce has shown statistically that the relationship between the increase in gross national product and the increase in production of printing has been very close. Acting on the assumption that this trend will continue, and it should, the Bureau has said that if the gross national product is 165 billions, the total volume of printing might reach 4½ billions. This is for all the Graphic Arts Industries, from newspapers, periodicals and books, through commercial printing to allied industries such as engraving, type-setting and electrotyping.

"Now, the total volume of these industries for 1939—the last year in which figures from the census of manufacturers are available — was 2½ billion dollars. Thus, the increase projected by these figures amounts to 75% and that means the total overall increase in your business after the war might well be 75% above what you did in 1939.

"That is the size of your problem, the enormity of your task if the prosperity of this country is brought to the level that the economists say it must. The question facing you as printers now is how are you going to handle this production? Will you be ready to produce this volume of printing if the war should end six months from now, one year or two years from now?

"The way to plan now is to do something about it now. There is going to be only one way to beat the gun. That is to plan now, and to carry those plans into production now as fast and as far ahead as possible."

Urges Creative Printer to Specialize in Specific Market Phase

Mr. Huddleston said that so diverse and competitive will be the postwar market that the creative printer will find it to his advantage to select one specific phase of the market and specialize in promotion for it. He suggested that the printer should establish himself as an authority in the particular postwar market which he has selected.

In order to establish himself under this plan, the speaker presented an outline of the various steps necessary to the establishment. These are as follows:

(1) Become informed of the conditions which will be faced by the industry in the postwar period.

(2) Then become acquainted with and list all postwar markets under their proper catagories, as transportation, agriculture, etc.

(3) Select one market which you and your organization would be most comfortable in serving.

(4) List all the new developments which will be introduced to the market you have selected after the war.

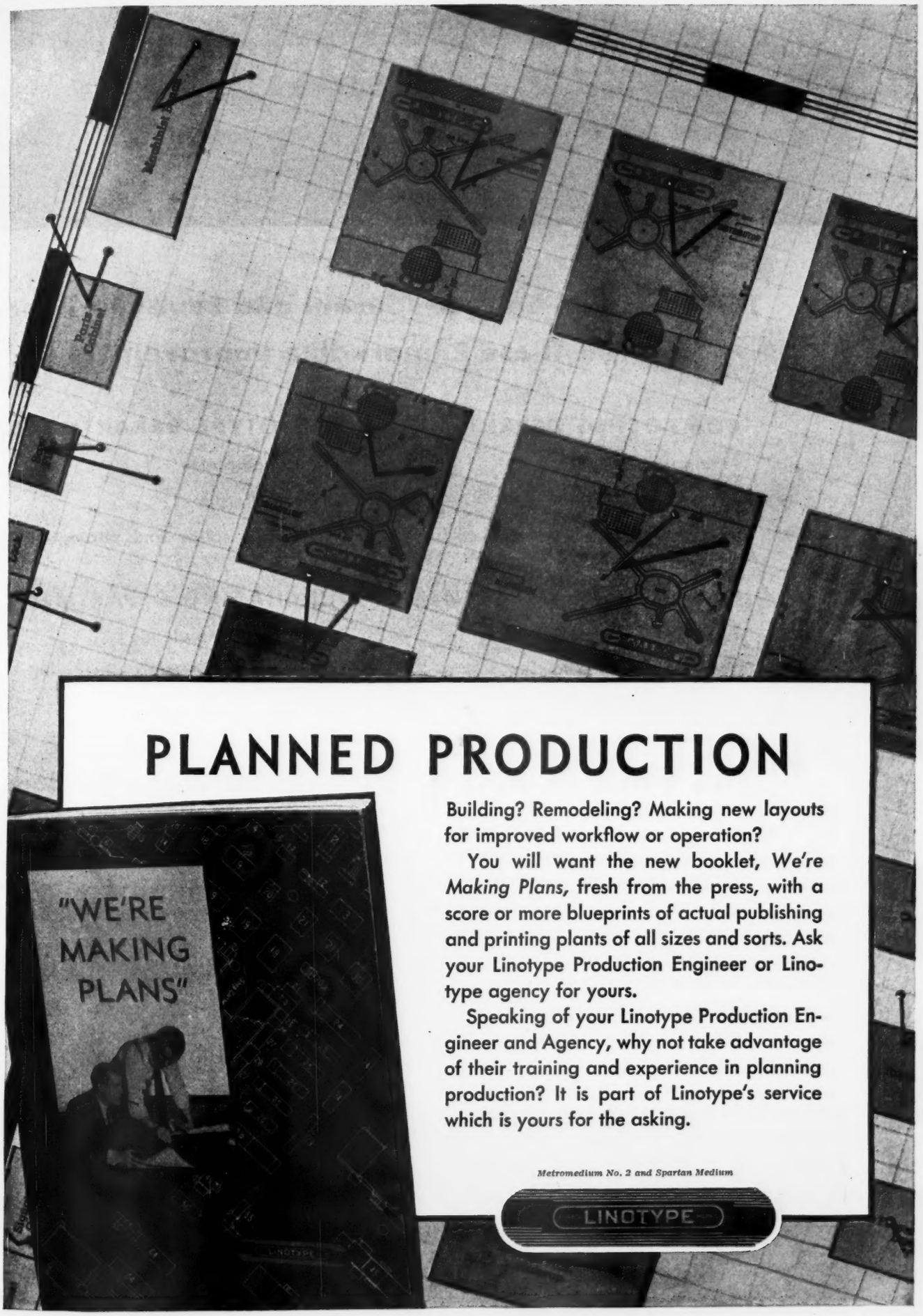
(5) Make a list of all the potential buyers of printing and advertising in that market.

(6) Get out some kind of promotion, addressed to these buyers, which discusses their postwar problems.

(7) Establish yourself as an authority in the particular postwar market you have selected.

(8) Selec favorable prospect in the market you have selected and offer to draw up a program.

(*Continued on Page 60*)



PLANNED PRODUCTION

Building? Remodeling? Making new layouts for improved workflow or operation?

You will want the new booklet, *We're Making Plans,* fresh from the press, with a score or more blueprints of actual publishing and printing plants of all sizes and sorts. Ask your Linotype Production Engineer or Linotype agency for yours.

Speaking of your Linotype Production Engineer and Agency, why not take advantage of their training and experience in planning production? It is part of Linotype's service which is yours for the asking.

Metromedium No. 2 and Spartan Medium

LINOTYPE

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The Louisville Courier-Journal and Louisville Times Secured These Remarkable Improvements

COMPOSING DEPARTMENT

1. Improved slugs
2. Down slugs eliminated
3. Over-all efficiency increased

STEREOTYPE DEPARTMENT

1. Improved plates
2. Hard solid plates
3. Improved solids and photographs

PRODUCTION DEPARTMENT

1. Controlled metal operations
2. Actual dross reduction
3. Minimized reproduction complaints

PURCHASING DEPARTMENT

1. Full metal knowledge
2. Actual metal costs
3. Lower upkeep costs

Plus Better Printing and Improved Reproductions

Wilkes "*New Methods*"

A scientific metallurgical method of dissolving the TIN-LEAD-ANTIMONY-CRYSTALS for perfect blending with service metal stocks to

1. Increase the tin content
2. Balance service metal
3. Control the impurities

ALSO

SEVEN definite *METAL INSTRUCTIONS* taught key men in handling and care of service metals. Checked periodically by Wilkes service men and technical staff to see that results are secured.

A Product of THE GLIDDEN COMPANY ME

NEWSPAPER ORGANIZATIONS

Wilkes "*Modernized Metals*"

FOR COMPOSING ROOM

Formula	No. 1	No. 2
Tin	6.00%	4.25% (min.)
Antimony	11.25%	12.00%
Lead	82.75%	83.75%

No. 1 Formula used at Louisville Courier-Journal

FOR STEREOTYPE DEPARTMENT

Formula	Black and White Plates	Color Plates
Tin	6.00%	8.00%
Antimony	13.50%	14.00%
Lead	80.50%	78.00%

Both stereotype formulas used at Louisville Courier-Journal

WILKES "Modernized Metals" available to the newspaper and printing industry for prompt delivery.

1. By exchanging dross for Wilkes new "TIN-LIFE" dross replacement metal pound for pound at current market dross exchange differential.
2. By purchasing sufficient Wilkes new "TIN-LIFE" reviving metal.
3. By exchanging entire old metal stock for Wilkes "Modernized Metals".

Newspapers interested in producing a better paper will need a modern type metal, better quality paper and higher pigmented inks. Wilkes Type Metal is available now and requires from six to fifteen months for gradual inexpensive change-over. By starting now, when restrictions are lifted on paper and inks, you will be ready with an improved physical appearance and modernized paper from a basic mechanical production standpoint.

Factual Information Upon Request • Stocks in Principal Cities

ARMY E NAVY

For excellence in production of war materials.

METALS REFINING COMPANY DIVISION • HAMMOND, IND.

EQUIPMENT and SUPPLIES

Hoe Convertible 4-Color 50x72 Sheet Offset Press

R. HOE & COMPANY states that its 50 in. by 72 in. press is the world's largest and fastest sheet-feed 4-color offset press. For postwar delivery, the press will be available in two sizes of each of four models in 1, 2, 3 or 4 colors. The two sizes are 50 in. by 72 in. and 42 in. by 58 in. The press is designed to produce offset magazine inserts in color, as well as many variations of direct mail advertising, catalog and other types of color work.

The press is built on the unit type, each unit being identical. Thus the owner of a 4-color press later on can convert it into two 2-color presses, or into one 3-color and one 1-color press. Additional units, according to manufacturer, can be added to a Hoe one-color convertible press at any time with assurance of positive register being maintained between the units.

The press is driven from the motor through a horizontal tubular sectional drive shaft extending the entire length of the press to which each unit is individually geared and synchronized.

All cams, gears and movable parts are enclosed in oiltight housings so that all operating parts work in a constant bath of oil.

The use of roller and ball bearings throughout the press insures smooth operation.

Manufacturer states the design of the press provides plenty of working room for the pressman between units, as well as working space in front of the first unit without increasing the overall floor space length required for the press.

The five vibrating elements in the inking and dampening mechanisms of each unit may be individually adjusted for stroke. All covered ink and dampening rollers are 4½ in. diam. Rollers operate in ball bearing pockets and permit accurate setting and smooth running without jumping or bouncing. Manufacturer states uniform distribution is insured through the use of two ductor rollers. The feed supply from the ink fountain roller is controlled by a fine-threaded hand-operated screw which controls the movement of the ink fountain roller from 0 to a maximum of 3½ in., by small fractional-inch variations.

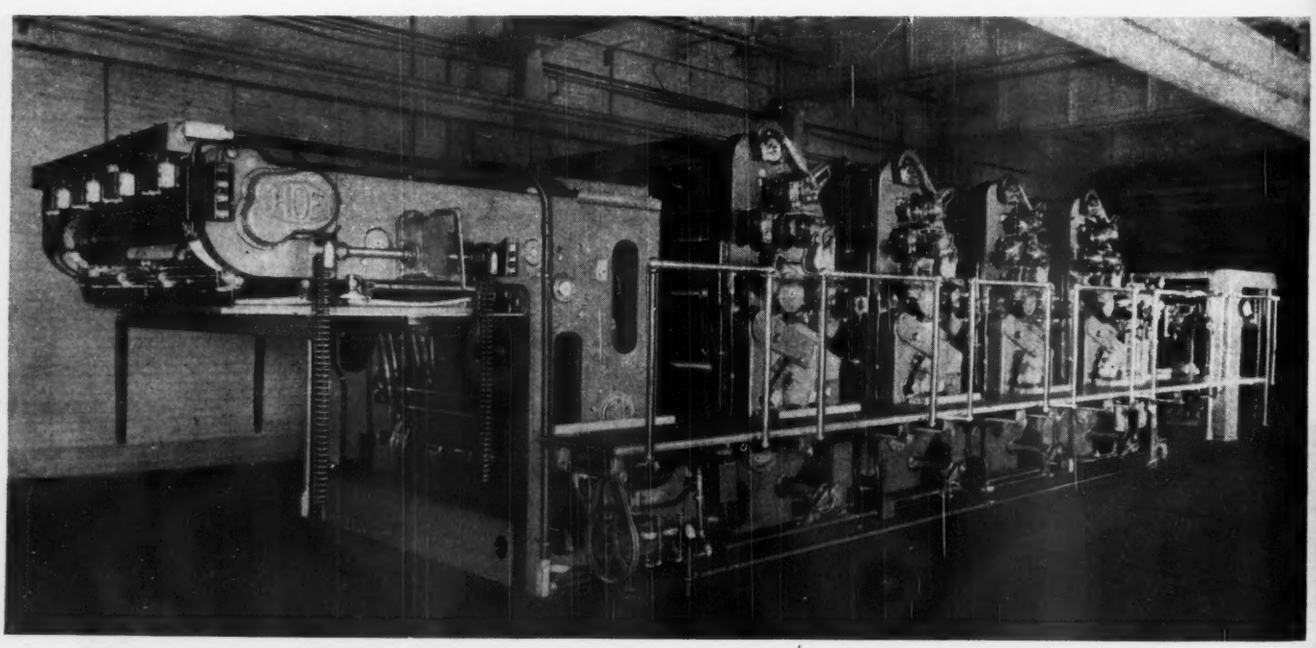
An electrically operated system of dampening control permits unlimited adjustment of the dampening mechanism and enables the press to be operated with a minimum amount of water.

The principle of pre-register of press plates before they are attached to the press is employed. This is accomplished by fastening plate clamps to the gripper edge of the press plates away from the press for the next job while the press is being operated on the first job. In plating the press, the pre-register plates with front clamps affixed drop into corresponding slots in the plate cylinder in closely approximate register position. The press is then moved forward, the back end of the plates inserted into the rear clamps when, by one movement of a lever, the plate is clamped to the cylinder without any possibility of distortion, regardless of the strength of the pressman, manufacturer asserts. This insures against register difficulties on the tail of the sheet caused by undue stretching of the plates.

Automatic register control is accomplished through electrically-operated levers at the delivery end of the press. Without stopping the press, the pressman can rotate the plate cylinder of any unit forward or backward, or move any plate cylinder laterally from left to right while the press is in motion to bring any one unit into positive register with other units while the press is in operation.

The principle of web feeding to individual sheets of paper has been applied. The sheet never stops for front and side register from the time the separators cause it to leave the pile. The sheet is carried from the separator to the feeding mechanism which carries the sheet forward to the front guides and automatically brings it to the side guide while still traveling forward. This operation is performed by an air control delivering the sheet to movable gripper bars which engage the sheet in the feed cylinder in front of the first unit of the press. The gripper bars retain fast hold of the sheet until the sheet passes through all printing units regardless of whether there are 2, 3, 4 or more. To insure positive register between all printing units each gripper bar is locked on each end into each impression cylinder of each printing unit, prior to the printing point and remains so locked until after printing has begun.

In the delivery, the principle of stream feeding has been utilized. The sheets are "stream delivered" at half the speed of the press. In this way, manufacturer claims, the sheets are piled so accurately that the printed sheets can be taken from the press delivery, reinserted by truck to the feeder, and re-run through the press without repiling or rehandling.



View of 50 in. by 72 in. offset printing press. Claimed to be largest and fastest sheet-feed 4-color offset press. For postwar delivery, press may be obtained in two sizes of each of four models in 1, 2, 3 or 4 colors. Press is designed to produce offset magazine inserts in color, as well as many variations of direct mail advertising, catalog and other types of color work.

"... but, I thank God, we have not free schools nor printing!"
First in a series of inserts dedicated to American Journalism, its past, its advancements, and its future.
GEO. H. MORRILL CO.
Division • General Printing Ink Corp.

IMAGINE a governor of one of the United States releasing the following statement today! "But, I thank God, we have not free schools nor printing; and I hope we shall not have these hundred years. For learning has brought disobedience and heresy and sects into the world; and printing has divulged them and libels against the government, God keep us from both." With all due respect to his lordship, Sir William Berkeley, Governor of Virginia for 38 years, we and the civilized world thank God for free schools and printing—and for a free press, the result of free schools and printing!

The right to speak one's mind, the right to publish the opinions of pro and con, and the right to print the honest convictions of journalists—are American privileges we hold sacred. While it is not exclusively American, we of this country zealously preserve the principle of free speech as the keystone of American Journalism: "May it never be otherwise."

It's ***a far cry*** **from the days of 1671 and the newspapers of America have come a long way from the early newsletters of our forebears, prototypes of newspapers from the old country. The lusty lungs of news-bearers today carry their messages into millions of homes via ink on newsprint.**

MORRILL has been serving the publishers of newspapers since 1840. In the MORRILL organization, research engineers are constantly on the alert to develop inks that will satisfy the publishers, the printers and the readers of newspapers. Just as news men interpret news—MORRILL interprets the needs of production managers to produce the highest quality in the printed page. A line of blacks is available—tailored to individual pressroom requirements—whether they be for the large metropolitan daily or the weekly serving a rural district. When it comes to color, consult MORRILL for ROP and Web Process Inks.

GEO. H. MORRILL C

DIVISION · GENERAL PRINTING INK CORPOR

100 SIXTH AVENUE · NEW YORK 13,

Factories: NORWOOD, MASS. · TACONY, PHILADELPH

CHICAGO, ILL. · SAN FRANCISCO, C

Branches: BOSTON · NEW YORK · CHICAGO · PHIL

DETROIT · ST. LOUIS · FORT WORTH · SAN F

ST. PAUL · LOS ANGELES · SEATTLE

Forced-feed lubrication is provided at all vital points of the press.

Some specifications of the Hoe Convertible Offset Press are as follows: Maximum sheet, 50 in. by 72 in.; minimum sheet, 25 in. by 36 in.; maximum printing area, 49½ in. by 71½ in; plate size 54 in. by 72½ in.; plate thickness, to suit preference; blanket size, 55 in. by 72¼ in.; blanket thickness, to suit preference; speed, 5000 sheets per hr.; feeder capacity, 48 in.; delivery capacity, 50 in.; floor space for the 4-unit press is 43 ft. 8 in. long by 14 ft. 6 in. wide; weight of 4-unit press is 132,000 lbs. Press h.p., 35; feeder h.p., 4; delivery h.p., 2.

Instrument for Testing 5-50 V. Circuits

IDEAL Commutator Dresser Co. has announced development of an instrument for testing electrical circuits below 50 v. The testing range is from 5 v. to 50 v. Tests for "open" circuits may be made by turning on a switch; hold one Test-Glo lead on the "hot" line and the

Ideal's Lo-Volt Test-Glo for testing circuits ranging from 5 to 50 v. Overall length is 7 in.

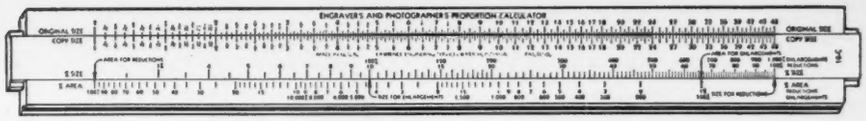
other lead to ground. If the Test-Glo lamp does not light up, the circuit is broken. When used as a line voltage tester, the brightness of the lamp indicates the relative value of the voltage.

The lamp is encased in a transparent plastic housing. Clip is provided for carrying in the pocket. Overall length is 7 in. The fully insulated test leads are 4 in. long. Weight is 3 oz.

Emulsifying Degreasant

THE development of a new concentrated emulsifying degreasant, G-BEX 45-A, has been announced by the Gaybex Corporation. A characteristic of this compound states manufacturer, is that it gains in strength with dilution. Other characteristics of this degreasing agent are its clean odor—and it will not corrode metals or harm the skin. This compound is chemically neutral. G-Bex is recommended by the manufacturer for the cleaning and degreasing of floors, machinery, motors, equipment and parts which are being processed—prior to finishing or assembling. It may be applied with a brush or spray gun or by dip. It may also be used in standard emulsion degreasing tanks, either cold or heated. When the dirt, oil and grease are thoroughly saturated, they are removed simply by flushing or hosing with water. A trace of the residual compound minimizes rusting after the washing process.

G-Bex is available in 1 gal. cans, 7½ and 54 gal. drums, and in commercial quantities.



Proportion Slide Rule

LAWRENCE Engineering Service has announced a new "Proportion" slide rule for use by engravers, lithographers, photographers and offset printers. This slide rule, machined from seasoned wood, is designed for similar use as the paper circles employed to figure enlargements and reductions. Once set, proportions stay put until they're changed. Scales read the full length of the rule, making it easy to adjust sizes to fit layout. The white lacquer face doesn't smudge and washes easily.

The back of this slide rule is plain Available in sets of three or in quantity·

New Silk Screen Inks are Alcohol Resistant

BONWIT TELLER, New York, recently featured in Fifth Avenue display windows, a group of perfume bottles which were printed by the silk screen process. The bottles formed part of a display of the creations of Adrian, fashion designer.

The printing of the bottles, it is reported, was accomplished with the use of a specially treated silk screen and a new printing technique developed by Creative Printmakers Group. The inks are a synthetic base type made by International Printing Ink Corp., and are heated after printing to form a hard and glossy surface which, it is claimed, will not scratch or mar. The feature of this type of printing it is said, is its resistance to the action of alcohol and other agents in perfumes and lotions which attack ordinary inks. Similar applications of these IPI inks are being made for packaging in fields where glass or plastics containers are used.

On July 1, Laurance B. Siegfried will assume his new duties as Professor of Graphic Arts and Head of the Department of Printing, Carnegie Institute of Technology, Pittsburgh, Pa. Professor Siegfried, since 1940, has been university printer and associate professor of journalism at Syracuse University. Prior to that time he was editor of the *American Printer*. Announcement was made recently by Dr. Webster N. Jones, director of College of Engineering. Prof. Glenn U. Cleeton, who has served as head of the Department of Printing for some time, recently was made Director of the Division of Humanistic and Social Studies. He will also continue as Chairman of the Department of Printing Endowment Fund Campaign. The goal for this campaign is $500,000 by July 1, 1946.

Suggestions . . .

for prevention of dermatitis among lithographers

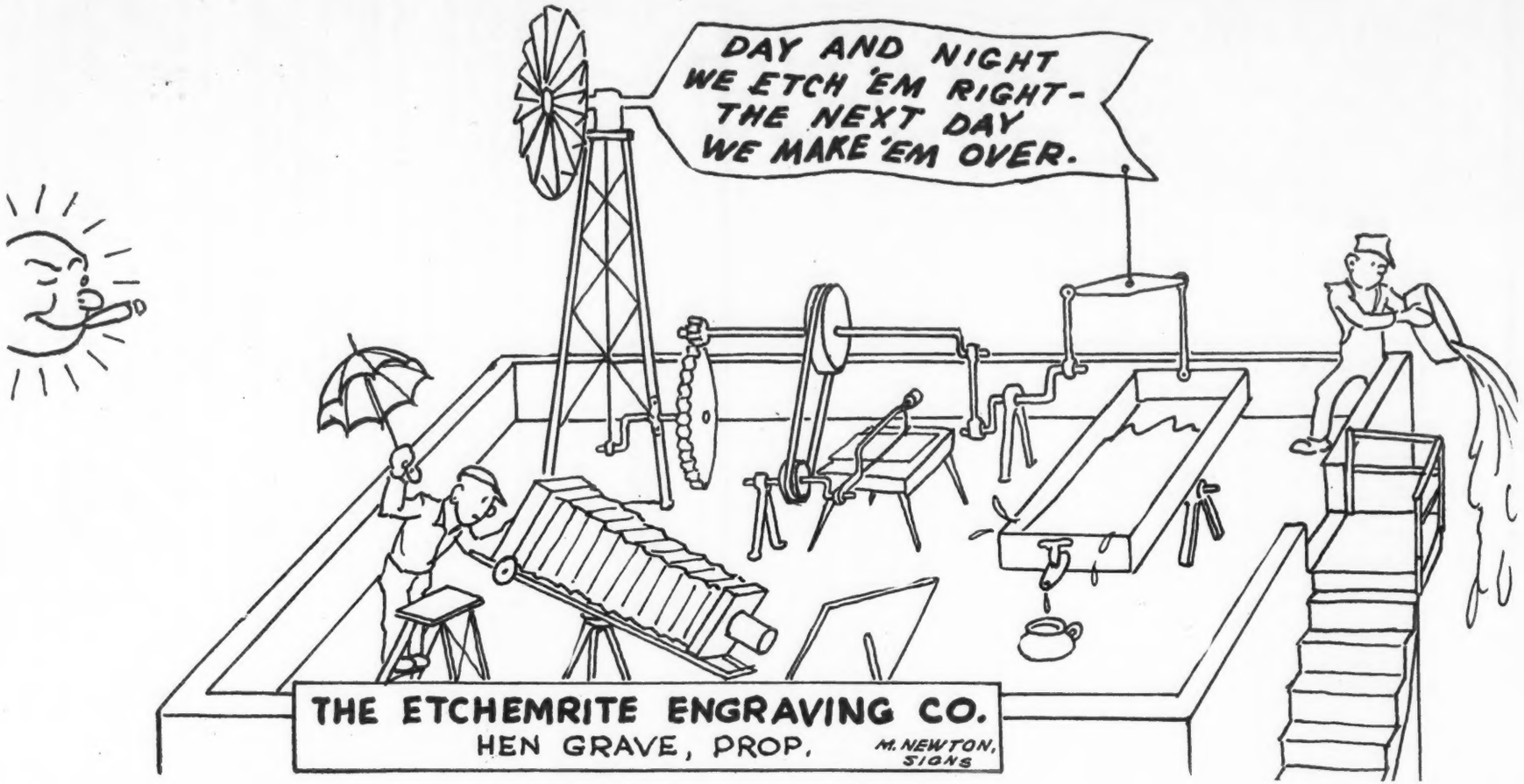
DR. LOUIS SCHWARTZ, Medical Director of the Dermatoses Section of the U. S. Public Health Service and consultant to the Lithographic Technical Foundation's Research Committee in its work on health hazards in the lithographic industry, has given these suggestions for the prevention of dermatitis among lithographers:

"Workers exposed to solutions of ammonium and potassium dichromate should wear rubber gloves and impervious sleeves fastened over the gloves at the wrist, as well as impervious aprons.

"Workers with turpentine, petroleum distillates, cyanides, or other cleansers should also wear the above protective clothing. Workers in the developing room exposed to the developer should wear rubber gauntlets sufficiently long to prevent the entrance into them of the developing solution.

"Workers exposed to irritant fumes which cannot be removed by appropriate suction hoods should wear protective ointment on the face, neck, and other exposed parts.

"Running water, soap, and other washing facilities should be placed in convenient parts of the workroom, and the workers should be instructed to immediately wash off their skins any chemical which may accidentally touch them. Workers who may be exposed for considerable length of time during the day to fumes from the alkaline dichromates should insert petroleum jelly in the nostrils as protection against nasal irritation."



Postwar Engraving Plant

Our readers will remember W. W. Warfel's Joe Bloe series which appeared in *Printing Equipment Engineer* some time ago. The illustrations for the Joe Bloe series were executed by M. Newton who is associated with Mr. Warfel in the serious business of earning a living. One of the departmental executives in that series was Hen Grave, the photo-engraver.

It now seems that Hen Grave is going into business for himself in Tin Cup, Colo., in the post-war period. He has made tentative plans for a two-man plant.

It will be noticed that Hen has provided modern conveniences by taking advantage of Nature. This plant will be air-conditioned, it will be supplied with natural daylight, waste disposal is no problem at all, and power to operate the equipment will be supplied by Old Mother Nature herself.

Mr. Grave's office, of course, is in his hip pocket. Simplicity itself—huh?

Jos. L. Woods B. F. Garrity A. E. Gall

Executive Changes Made in the Gannett Organization

THREE mechanical executive changes were announced recently by Production Manager J. A. Burke of the Gannett Newspapers, Rochester, New York. Bernard L. Garrity who until recently has been mechanical superintendent of the Hartford (Conn.) *Times*, has been promoted to an executive position on the two Rochester newspapers, the *Democrat & Chronicle* and the *Times-Union*. Aloysius Edward Gall, former assistant foreman on the Rochester *Times-Union*, was promoted to superintendent of the *Democrat & Chronicle* composing room. Joseph L. Woods has been foreman of the *Democrat & Chronicle* composing room and has been promoted to the position of production manager of the Hartford (Conn.) *Times*.

Mr. Garrity assumed his new duties April 1 in Rochester. Mr. Woods took charge in Hartford the first part of March, while Mr. Gall took up his new work on February 16.

Brief biographies of the three executives are printed below.

Joseph L. Woods started to work on the Watertown (N. Y.) *Standard* in 1922.

He moved to Rochester in 1925 and started to work in the *Democrat & Chronicle* composing room.

Served as vice chairman in the *Democrat & Chronicle* chapel for two years, 1930 and 1931.

Was elected chairman of the chapel in May 1932 and continued as chairman for four years.

In 1934 he was appointed foreman of the lobster shift and held this position until 1936 when he was appointed assistant foreman of the *Democrat & Chronicle*.

In 1942 Mr. Woods was made foreman of the *Democrat & Chronicle* and has held that position up to the time he was appointed production manager of the Hartford (Conn.) *Times*.

He is married and has one daughter, Ann.

His hobbies are golf and dancing.

Bernard F. Garrity was born in Hartford, Conn. His father was a printer on the Hartford (Conn.) *Courant* where Mr. Garrity learned his trade.

He was in the first World War—served one year in the United States and one year in France.

Upon his discharge he returned to work for the *Courant*. In 1922 he retired from the printing business to raise tobacco which he did not find too satisfactory and in 1924 he went to work at the Hartford (Conn.) *Times*.

He was made superintendent of the *Times* composing room in 1931, mechanical superintendent in 1932, and production manager in 1938.

He is past president of the Composing Room Executive Association, and at the present time, is a director of the New England Mechanical Association.

He is married and his present home is in West Hartford.

His hobbies are golf, handball and he smokes big black Connecticut Broadleaf Cigars when he can get them.

Aloysius Edward Gall was born in Rochester, N. Y. on January 2, 1902.

Attended St. Michael's school.

Started his apprenticeship on the old Rochester (N. Y.) *Herald* in the spring of 1918.

When the *Herald* was suspended in 1926 Mr. Gall worked for several months on the Rochester *Journal* and in April 1926 started to work on the makeup of the *Times-Union*.

He was appointed assistant foreman of the Rochester *Times-Union* composing room in 1942 and appointed superintendent of the Rochester *Democrat & Chronicle* composing room on February 16, 1945.

He is captain of the Gates-Chili Volunteer Fire Department—never attended a fire at night.

Mr. Gall is married and has a son, John W. and a daughter, Noreen L. Lives in Gates, N. Y.

Hobbies are raising chickens and having a Victory garden.

Preservative for Gum Arabic Solutions

AN experiment performed in the research laboratory of the Lithographic Technical Foundation indicates that phenol (carbolic acid) is an excellent preservative for gum arabic solutions.

Recently the Foundation's research staff opened a bottle of gum that had been made up to the proper specific gravity for preparing deep-etch coatings (13.5 deg. Baume) on November 16, 1941, and to which two-tenths of 1 percent of phenol had been added. The bottle had been allowed to stand on a laboratory shelf since the solution was made up. When the bottle was opened several months ago, the solution seemed to be in approximately the same condition physically and chemically as when it was prepared. Upon testing, it appeared to work just as well as a freshly prepared batch of gum not only in deep-etch coatings but also for gumming up plates and in plate etches.

The Foundation states that this experiment was not part of a research project and that it has had no opportunity to accumulate any information on the other preservatives—such as formaldehyde and thymol—which are sometimes used in gum arabic solutions. However, there are many lithographers who use no preservative in their gum and who make up a fresh batch every day, especially in warm weather, throwing away whatever is left over from the preceding day's work. Some of them may wish to try using phenol.

The Foundation's research director, Robert F. Reed, suggests the following formula for making up a gum solution containing two-tenths of 1 percent of phenol:

Gum Arabic, U.S.P. or
Cleaned Amber Sorts.... 40 avoir. oz.

Water..... 3 quarts
Dissolve and add

Phenol, U.S.P. liquid..... ¼ liq. oz.
Mix thoroughly, make up to the desired Baume density with water, and strain.

Phenol (Carbolic Acid), U.S.P. Liquid contains 88-90 percent phenol. Pure phenol is crystalline or solid.

Iowa Machinists Cancel Meeting

President Carl B. Bloomburg of the Iowa Line-Casting Machinists' association, has announced that the meeting to have been held on May 19 and 20 in Des Moines has been cancelled. The machinists always hold their meetings at the time of the Iowa Mechanical Conference, which latter meeting as was announced in the February issue of *Printing Equipment Engineer*, has also been cancelled. The cancellation of the meeting, as is the case with all other technical meetings in the industry, was cancelled in conformance with the request of the powers that be in Washington, D. C.

S. A. Printer's Machinery Needs Replacement

Priorities on paper and inks are causing many delays in delivery of orders with Brazilian printers, reported Rubens D'Almado H. Porto, manager-director de Artes Graficas Industrias Reunidas, S.A., upon arrival in Miami from Rio de Janeiro Monday (Feb. 5) on the Brazil Clipper of Pan American World Airways.

"Printers are suffering from the inability to replace worn out machinery. I have come to the United States with the hope of purchasing second hand machines to be used in our book publishing business. Rationing on paper and ink is troublesome, but worn out equipment is our chief worry," the publisher explained.

Porto, former director of the Government printing office, will visit Washington, D. C., New York, Philadelphia, and Chicago. He plans to be in the U. S. until the first of April.

Appoints St. Louis Representative

The Government Printing Office has appointed a representative to supervise contract printing in the St. Louis area for the government and to act as liaison between St. Louis printers and lithographers and the Government Printing Office in Washington. Paul P. Tice, who was appointed to fill the position, according to an announcement by the Public Printer, A. E. Giegengack, took over his new duties on March 5.

Prior to his appointment as St. Louis representative, Mr. Tice was a member of the Chicago warehouse staff of the GPO. He has worked for Uncle Sam's big print shop since entering his apprenticeship there seventeen years ago.

The Public Printer's decision to appoint a representative at St. Louis results from a recent visit to that city at which time he accepted an offer of graphic arts leaders there to increase production of war printing.

The GPO's St. Louis representative has quarters in the Paul Brown Building, 818 Olive Street, and is now available for consultation with printers in the area.

Warping of Book Covers

FOR many years binderies have been faced with the problem of preventing the warping of book covers.

Studies at the Government Printing Office led to the conclusion that the pull of the end sheet, during the drying out which occurs after the books are cased-in, is one of the primary causes of the warping of covers. Flour paste contains an average of 85 percent water and, because of its low fluidity, has a tendency to lie in ridges on the paper instead of in a uniform layer. Considering this high water content, the excessive quantity of paste occurring in ridges constitutes a considerable amount of water to be absorbed by the binders board and the end sheet. This absorbed water weakens the board, while that absorbed by the end sheet causes the paper to expand. Consequently, by contraction during drying out, the end sheet exerts a strong pull on the weakened binder board, causing warping of covers.

Research was then conducted to overcome these difficulties, resulting in the formation of glucose glycol paste which contains a much smaller quantity of water than the flour paste.

Glucose Glycol Paste

	Percent
Water (added at the start)	35.00
Diethylene Glycol	10.00
Glucose (43° Baume Corn Syrup)	20.00
Beta Naphthol	0.10
Ammonium Alum	0.30
Flour (soft winter wheat)	19.60
Water (condensation of cooking steam)	15.00
Total	100.00

This paste contains only 50 percent of water in place of the 85 percent contained in flour paste, and has sufficient fluidity to cause it to lie on the paper in a thin continuous layer. Thus, only about half of the usual amount of water is present to be absorbed from this paste by binders board and end sheet in comparison with flour paste. This decrease in the water content diminishes the degree of expansion and contraction of the fibers in both the board and end sheet and therefore reduces the extent of warping. An additional advantage is that the glucose and diethylene glycol may possibly permit the end sheet to slip slightly while drying, thus relieving to some extent the strain on the binders board cover during the drying process. Another advantage is that the diethylene glycol has a solvent action on pyroxylin treated fabrics which results in good adhesion to their turn-ins during the casing-in operation.—M. S. Kantrowitz, Chairman, Research Committee, Washington Club of Printing House Craftsmen. Reprinted by courtesy of *The Capital Craftsman*.

Pacific Mechanical Conference Postponed

In addition to the ANPA Mechanical, the Iowa and the Northwest Conferences which were announced as having been cancelled in previous issues of *Printing Equipment Engineer*, President Ira Stuck of the Pacific Newspaper Mechanical Conference has announced postponement of the Pacific meeting from the scheduled meeting date of May 12 and 13.

Mr. Stuck states that the action was taken by the officers who also issued a statement that should war-time restrictions be lifted, a call will be issued for a meeting in San Francisco later in the year. President Stuck's address is at 851 Howard St., San Francisco, and Secretary Edw. N. Conley, who is color press foreman, may be reached care of *The Chronicle*, in the same city.

Thanked for Cancelling Mechanical Conference

In a recent issue of the American Newspaper Publishers Association an excerpt from a letter received by the ANPA at its New York offices from the War Committee on Conventions in Washington was published:

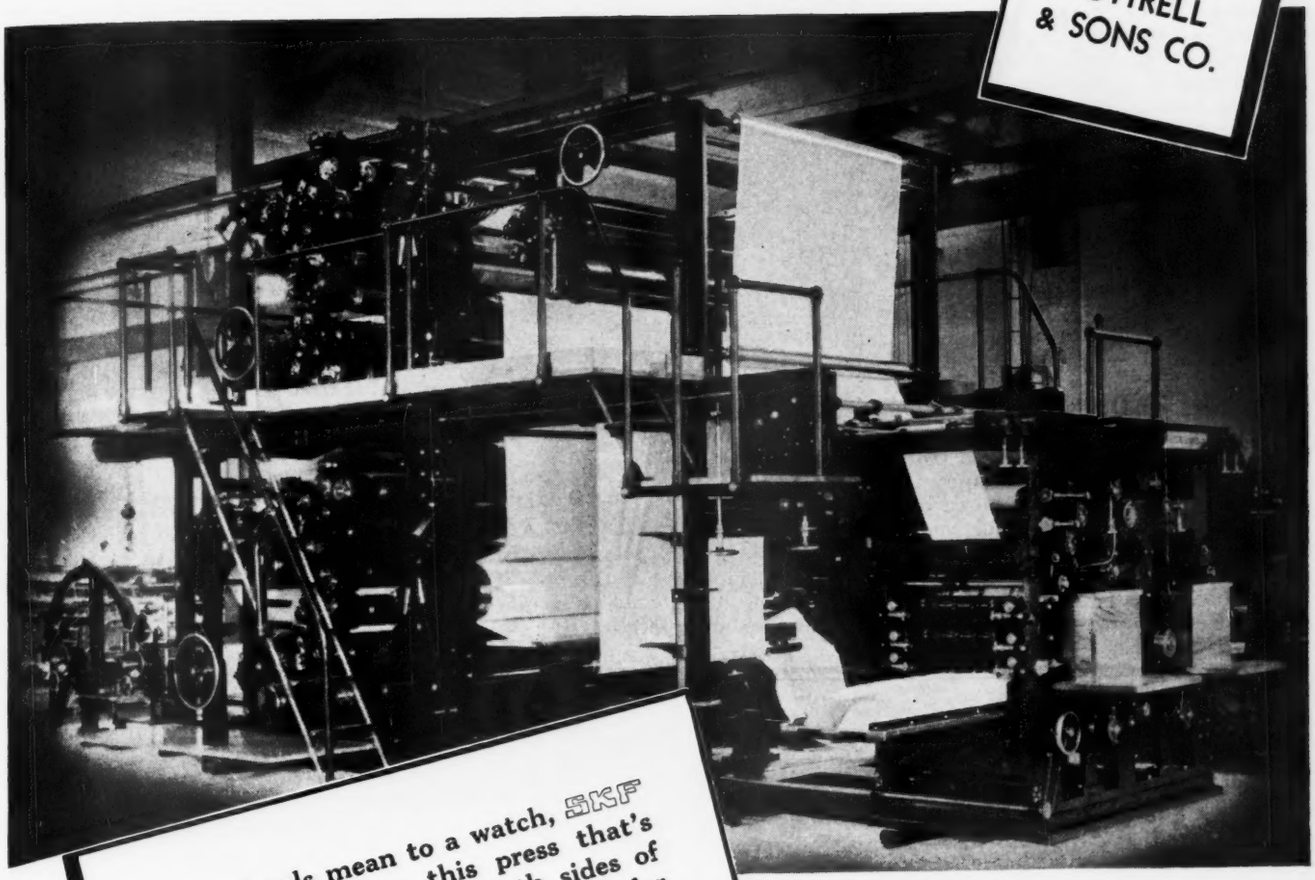
The excerpt is as follows: "The War Committee on Conventions welcomes the receipt of an announcement stating that the Board of Directors has canceled the 18th ANPA Mechanical Conference which was scheduled to be held in Chicago during the month of June. We note also that the annual convention scheduled for the month of April has also been canceled. Your spirit of cooperation is indeed commendable and is a very real contribution to the furtherance of the war effort."

Wins Fourth Award

Employees of The DeVilbiss Company, Toledo, Ohio, have won the Army-Navy E Award for the fourth time for high achievement in the production of war material, according to advice recently received from Robert P. Patterson, Under Secretary of War. DeVilbiss workers received their first citation in December 1942.

PRESSES RELY UPON SKF's FOR HIGH SPEEDS

BUILT BY C. B. COTTRELL & SONS CO.



What jewels mean to a watch, SKF Bearings mean to this press that's printing five colors on both sides of the paper. They're the reason for high speeds, uniformly applied color, close register, preventing waste resulting from vibration backlash, etc. They're the bearings with low lubricant consumption, axial and radial rigidity, self-alignment to compensate for shaft deflections without binding and many other advantages.

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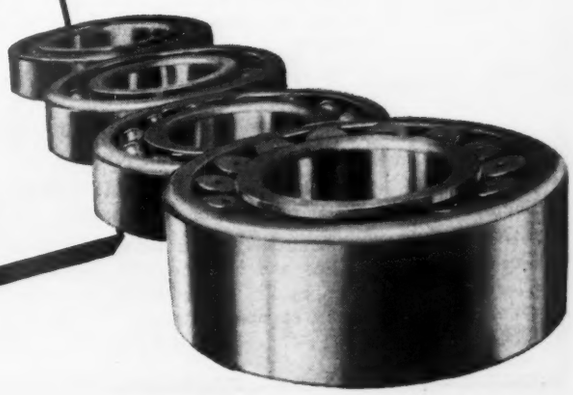
SKF INDUSTRIES, INC., PHILA. 34, PA.

SKF

BALL AND ROLLER BEARINGS

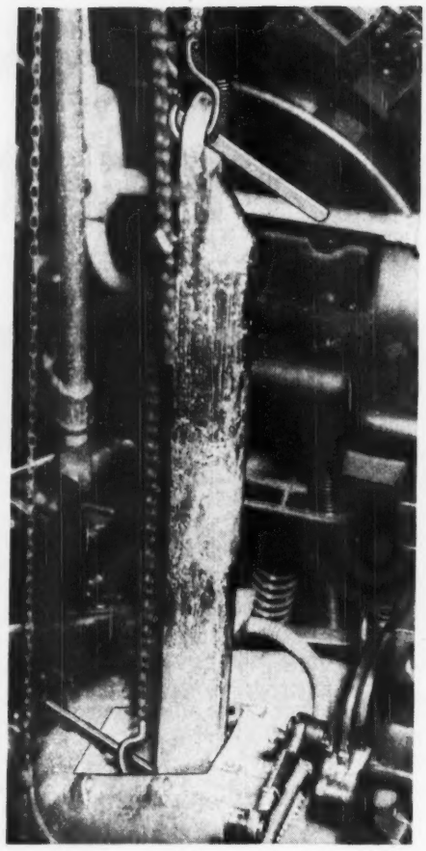


Stationers Gothic Bulletin

Lanston Monotype Machine Company has published an eight page french-fold bulletin (8¼ in. by 10¾ folded size) in which are displayed practical settings of stationery and other types of printed matter all set in Monotype Stationers Gothic Family, designed by Sol Hess, Monotype Art Director. Shown are light, medium and bold. Each weight is available in four sizes on 6 pt. body and three sizes on 12 pt. body for machine composition. For hand composition, three sizes are shown on 18 pt. body and one size on 24 pt. body. A copy of this bulletin may be obtained upon request either to Lanston Monotype Machine Co. direct, or to *Printing Equipment Engineer*.

Pig Ear Skid

FOR line-composing machine Margach type metal feeders in those composing rooms where the pigs or ingots are not cast with the split type of ear, Chief Machinist A. K. Billman of the St. Petersburg (Fla.) *Independent* has made and is using a device to automatically drop the ear into the metal pot. By means of this device the pig supporting hook of the feeder can be raised by the machinist to permit hanging on a fresh pig without the necessity for bumping off the remaining portion of the ear, as would be the case with the solid type of ear.



This illustration shows modified metal feeder supporting hook devised by Chief Machinist A. K. Billman of the St. Petersburg (Fla.) Independent. *The device is for use with pigs or ingots not cast with split eye. When the lever strikes the pot cover opening, the unmelted portion of the ear is skidded into the metal pot.*

The accompanying illustrations really explain how the ingot hook is modified to permit attachment of a lever for dumping the ear into the metal pot. As will be noticed by looking at the halftone illustration, the free end of the lever inserted in the hook is raised at a considerable angle when the lever strikes the edge of the opening in the pot cap.

In preparing the hook for drilling the ⅛ in. hole, the end is first flatted off sufficiently to provide a starting surface for the drill as well as to secure a flat surface against which the ⅛ in. pin can be riveted at both ends. In the diagram it will be seen that the hook is slotted with a 10 in. hacksaw blade up as far as the top elbow in the hook.

The lever itself is made from a half-section of 10 in. hacksaw blade. The blade is broken in two pieces, the broken end squared and the teeth ground off.

After the hook has been slotted with the 10 in. hacksaw blade, a No. 16 round belt hook 4 in the diagram is bent around the hook body to furnish a bottom support for the lever.

When the lever has been fastened in the hook slot with the ⅛ in. pin, raise the free end of the lever as high as possible and grind off both the point of the pig hook and the end of the blade so that

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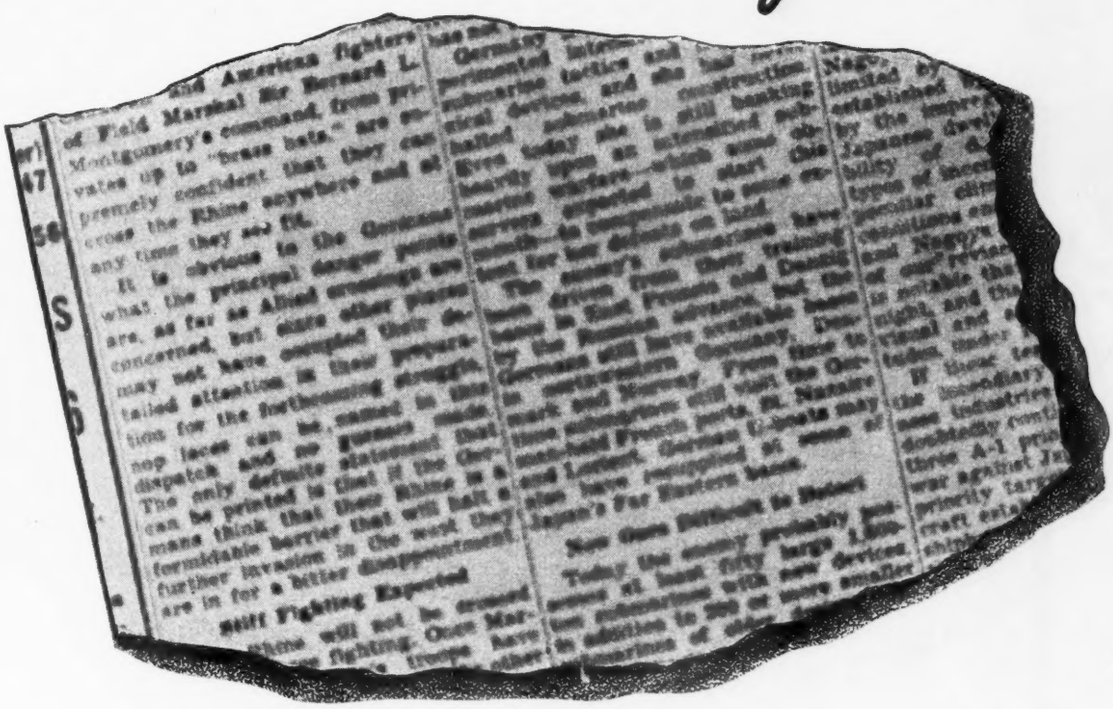

When a reader sees printing that looks like this, it may be that he needs the services of an optometrist. But it may be because the plate maker needs better equipment. Either case calls for precision-made instruments.

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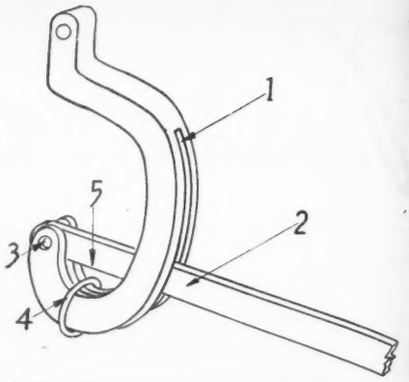
the pig ear will slip off smoothly when the lever is raised by the pot cover.

If a little more down-angle of the lever is desired to furnish a more secure support for the pig, grind a notch in the lever at the point where it rests on the round belt hook.

Mr. Billman states the device has been in use in the plant of the St. Petersburg *Independent* for some time with satisfactory results. He mentions a few precautions to be observed in connection with the pig ear skid device: (1) If the line - composing machine should be turned over when the pot is cold, the hook may slip from the pig ear; (2) If the metal pot has been permitted to run low, so that while the machine is in motion the rate of feed is greater than the rate of melting off of the ingot, the pig may slip from the supporting hook if too much slack occurs in the pig supporting chain; (3) So that the end of the tripping lever **2** in the diagram may not become caught and raised, Mr. Billman has removed the slack loop in the operating chain. If it is felt that the slack loop must be retained, the loop hook may be moved further down alongside or beneath the metal pot jacket.



In this diagram is shown a pig supporting hook as modified by Chief Machinist A. K. Billman of the St. Petersburg (Fla.) Independent *to skid off pig ears from the hook in that type of pig not cast with split eye. At* **1** *is shown the slot cut into the hook with a 10 in. hacksaw blade;* **2** *is half-section of 10 in. hacksaw blade with teeth ground off;* **3** *is* ⅛ *in. pin for pivoting the lever* **2**; *at* **4** *is indicated a No. 16 round-belt hook clamped about the hook—this hook furnishes a safety support for lever* **2**; *at the point* **5** *a notch may be ground in lever* **2** *so as to secure greater down-angle of the lever.*

Level, Type-high Form Important

TOO much stress cannot be placed on the importance of having units of the form level and type-high before proceeding with makeready and yet it is a rule more often honored in the breach than the observance. Failure to observe the rule may result in poor register, slurs, wrinkles, workups and faulty inking.

It has been stated that flat-bed presses have been engineered from the basis of a level, type-high form. The first step in pre-makeready is to prepare the units of the form to conform with this basis. Low cuts should be raised with interlay or underlay. A spot-up underlay under a wood base requires good judgment and it is generally preferable to plane the bottom of the base and use a sheet or more under all of the base. If it appears that there are wells in the wood base, it is necessary either to interlay to compensate or else plane the wood base on both top and bottom. The purpose is to obtain a form the printing surface of which is uniformly level, with no high and low spots, without which it is impossible to operate with a reasonably smooth cylinder.

If the units of the form are not of uniform height, overlays to compensate for low units to make them print will cause hills. The absence of overlay in register with high spots will cause valleys. Some parts of the packing will be higher and others lower than the bearers. Low units will slur and high ones will print long since form and cylinder are not traveling in unison. The sheet cannot lay smooth on the drawsheet and misregister and slur may be expected.

A workup often is caused by a cut that rocks because it is not level and type-high. The rocking raises spacing material and type. The pumping action is repeated with each impression and while the type may be forced down the spaces gradually work up, are inked and mark the sheet.

If the units are not of uniform height, it is difficult to obtain good inking as the form rollers will wipe the edges of high units and fail to firmly roll the low ones.

Wrinkles in sheets when printing a border close to the four edges are less troublesome if the border is carefully made level and type high. A hard packing and as little overlaying as possible help to prevent wrinkles and this means that the form must be level and type high. Otherwise all other preventives fail.

In case you haven't thought of it lately, type-high is 0.918 in. with tolerance plus or minus of one-half thousandth of an inch.

Patents

For The Graphic Arts Field

The patents reported here are those issued on Feb. 20 and 27; March 6 and 13.

This data is compiled exclusively for Printing Equipment Engineer by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading for the dates specified.

For copies of patents listed here, specify the patent numbers and send 10c for each separate patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating:

2,371,566. BOOKBINDING METHOD AND MEANS of the multi-ring type in which the leaves are not secured to each other. The ring binding, itself, may be made from strip material such as paper or sized cloth instead of the usual plastic or metal. Two strips are glued together along a major portion of their width and fingers are stamped comb-fashion out of the glued-together portion. The back of this comb-like piece is the unglued portion and here the two strips are separated to form lips in open V formation. The fingers are inserted through slots formed in a stack of sheets to be bound and are bent in a loop around the sheet edges and the free ends of these fingers are inserted in the V of the lips. Finally the lips are secured together with the finger ends sandwiched between them and held by adhesive which was applied at the time major portions of the laminated strips were glued, i.e., before the finger stamping operation. Invented by Robert Alonzo Williams, Chicago, Ill. Unassigned. Application March 8, 1943. 13 claims.

Composing Room Equipment:

2,369,947. TYPE SLUG END CUTTER which may be used with any slug trimming mechanism or independently of such units. Grippers are positioned to receive a slug and present it to the cutting members and then eject it after it has been cut. Mechanism is provided for reciprocating one of the gripper connections between the grippers to cause them to close on the slug during their movement toward the cutter and to release the slug as it is ejected from the cutter. One gripper is raised relative to the other during ejection to permit the slug to be pushed against a stack of slugs previously cut. Invented by Charles W. Curle, San Francisco, Theodore C. Curle, Ross, and Ray F. Newton, San Francisco, Calif. Unassigned. Application October 31, 1941. 6 claims.

2,371,484. TYPESETTING MACHINE in which the rotary cam operating rolls are made of wood instead of metal. A heat box is located under the rolls for maintaining the rolls substantially dehydrated at all times and for preventing sticking of the rolls and cams. Invented by Peter Vassallo, Avalon, N. J. Unassigned. Application April 7, 1943. 2 claims.

Feeding, Folding and Delivery:

2,369,686. SHEET HANDLING APPARATUS for use in connection with printing cylinders. A valve, positioned intermediate the sucker and the source of suction, controls admission of suction, and mechanism that is movable synchronously with the sucker operates the valve which is always either entirely open or closed. A snap action valve, opened or closed by the action of a spring, may be used. By positioning the valve adjacent the sucker rather than at a point considerably removed from it, with a short connecting tube therebetween, more accurate results can be obtained in the operation of the lifting sucker and release of the sheets at the proper moment. When it is used in feeder for registering sheets to a guide, the valve may be on an oscillatable carrier which advances sheets by suction. Invented by Andrew Neuhart, West View, Pa. Assigned to Miller Printing Machinery Co., Pittsburgh, Pa. Application August 15, 1941. 7 claims.

2,369,729. PAPER FEED which is intended particularly for use on a card punching device to prevent chips, dust, etc., from falling into the machine as the cards are fed, but which may also be adapted for use on printing press rolls. Hubbed feed rolls extend into the chamber through which paper is fed. The chamber may be lifted above the rolls during the operation of the device. Rolls are provided with peripheral and lateral ridges and the hubs are provided with longitudinal ridges increasing in depth outwardly from the rolls to prevent paper fragments which may fall out of the chamber from clinging to the rolls or the hubs. Invented by John T. Ferry, Ilion, N. Y. Assigned to Remington Rand Inc., Buffalo, N. Y. Application September 2, 1942. 9 claims.

2,369,914. SHEET-FEEDING MECHANISM which will remove one sheet at a time from a stack in rapid succession and deliver the sheets in timed, accurately registered relation. The mechanism engages and progressively deflects an outermost sheet of the stack and then bends the deflected sheet away from the stack throughout the major portion of its length and then slidably withdraws it. To accomplish this, the edge of the stack of sheets is rested against a rotatable cylindrical drum having a slot in its periphery extending longitudinally in inclined relation to the axis of the drum so as to receive an edge portion of the outermost sheet and progressively deflect the edge portion widthwise of the sheet away from the stack throughout its width. Meanwhile the cylindrical surface of the drum engages and supports the undeflected portion of the outermost sheet and also engages the next adjacent sheet and restrains the portions of both sheets which are engaged by the cylindrical surface of the drum from displacement. Invented by Leon E. La Bombard, Nashua, N. H. Assigned to The International Paper Box Machine Company, Nashua, N. H. Application August 26, 1942. 27 claims.

2,370,165. INDICATING DEVICE designed for a machine to slit and rewind cigarette papers, but which may be used without the slitter to indicate the diameter of a roll of any kind of material or the length of the material wound thereon. A calibrated tape with progressive variable proportional units indicative of length measurement is used. A loop at one side of the tape attaches to a supporting shaft for the roll, the shaft being adapted for rotation of the roll and mounted so as to move into a different axial plane during winding of the roll and thereby causing lengthwise movement of the loop-attached end of tape. A weight at the unattached end of tape maintains it in straightened aligned position. The calibrated tape is pulled under a pointer thus indicating the length of paper wound on the roll. Invented by Paul R. Heygel, Asheville, N. C. Assigned to Ecusta Paper Corp. Application July 8, 1942. 8 claims.

2,371,023. SYNCHRONIZED DRIVE shown in connection with a gathering and a binding machine. The two machines are provided with electrical control circuits and separate motors for respectively driving separate shafts joined together by a free wheeling clutch. One motor may be energized for driving its corresponding shaft only when the controlling circuit for the other motor is completed and driving its corresponding shaft. The one motor serves to drive its shaft at a speed slightly in excess of speed of other shaft to insure maintaining synchronized rotation of the two shafts. Invented by Richard Blow, Chicago, Ill. Assigned to W. F. Hall Printing Company, Chicago, Ill. Application February 8, 1943. 10 claims.

2,371,190. SHEET HANDLING APPARATUS featuring an improved mechanism for changing the elevation of the pile support as papers are delivered from printing press. It comprises joggers for the pile with a jogger retracting arm and a spring that urges the arm in jogger retracting movement. An oscillatable cam periodically moves the

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arm in opposite direction against action of the spring. A stop which may be rapidly shifted and adjusted, limits the jogger retracting movement of arm. Invented by August A. Saul, Pittsburgh, Pa. Assigned to Miller Printing Machinery Co., Pittsburgh, Pa. Application April 3, 1941. 13 claims.

Miscellaneous:

2,369,946. COMPOSITION USEFUL IN FORMING A PROTECTIVE FILM ON METALS and cleaning dust, grease, and cosmoline from printing machinery, typewriters, adding machines, engines, etc. The base composition comprises lanolin or wool fat, finely divided cuprous oxide, oleic acid, and a tertiary aromatic amine for neutralizing. The base is then extended in a hydrocarbon solvent. Invented by Jacob Maurice Cohen, Washington, D. C. Unassigned. Application January 25, 1941. 8 claims.

Plate Making:

2,370,186. WIRE MESH DIE by which any sheet materials such as paper, textiles, leather, sheet metals, or plastics in general, may be embossed or pebbled or even perforated by pressing the design into the material itself. The wire mesh may be a soft metal for small runs, or a hard alloy such as monel, for heavy duty. It has a compacted design area and may be easily attached to machines or wrapped around rolls. Several sheets may be pressed at one time with the wire mesh die if design is to cut through the material. Various effects may also be obtained by impressing the same pattern or design on the fabric master, but in various degrees of depth, the impressions being made close to one another or across each other. A three dimensional design is accomplished by having depressions in the upper and lower surfaces of the wire screen die symmetrical to and opposite each other. Invented by Edgar C. V. Oldofredi, New York, N. Y. Unassigned. Application February 2, 1942. 6 claims.

2,370,461. HALFTONE INTAGLIO TEXTILE PRINTING ROLLER capable of accurately reproducing on textile fabrics patterns or designs having photographic tonal shade gradations and in multi-color. A halftone positive photographic reproduction of the desired subject is made with a 100 per inch screen mesh. The darker tone of the image pattern consists of light dots on a dark field and, to increase the area of light dots in selected darker areas, the dark field is photographically reduced. This produces an altered halftone photographic pattern of subject in which enlarged separate light dots are defined on a dark field in selected darker tones. The altered halftone pattern is photographically reproduced on a printing roller surface which roller is etched, in areas corresponding to the opacities of the altered halftone positive, to provide an intaglio printing surface in which darker tone areas of image are continuous channels in the general form of a grid. Invented by Rudolf Heberlein, Wattwil, and Max Fretz, Zurich, Switzerland. Assigned to Heberlein Patent Corporation, New York, N. Y. Application June 12, 1942. 5 claims.

2,370,874. STENCIL SCREEN AND METHOD OF MAKING by using nylon and rayon in place of stainless steel wire or silk as formerly used. These substitute materials are treated to prevent excessive sagging or stretching after screen has been attached to its frame. The mesh fabric is moistened to render it stretchable, stretched while moist and attached to the supporting frame, and then dried. The dried fabric is subjected to a gelatin size and again dried. A sheet of moist light sensitive gelatin is transferred onto the screen. The materials are subjected to a temperature of 90° F. at a humidity of 45%, to fuse the fabric, size and sheet gelatin into a unitary sheet. Invented by Harry E. Playford, Sapulpa, Okla. Assigned to The Liberty Glass Company, Sapulpa, Okla. Application March 16, 1942. 2 claims.

Printing Inks and Related Chemicals:

2,369,666. PROCESS OF SULPHURIZING AN ORGANIC COMPOUND by treating with an agent adapted to introduce vattable sulphur atoms into the organic compound. The improvement consists of using as the sulphurizing agent a complex addition compound of aluminum chloride and sulphur monochloride obtained by reacting aluminum chloride with sulphur monochloride at elevated temperature in the absence of a solvent. Coloring matters are obtained by reacting with an aluminum-chloride-sulphur-monochloride complex of the constitution $AlCl_3.2S_2Cl_2$ upon organic dyes and pigments of the anthraquinone, indigo, thioindigo, phthalocyanine, azo and sulphur classes, and upon aromatic compounds generally used as intermediates for coloring matters of the above classes. The dyes are useful in dyeing cotton, rayon, wool, nylon, etc. Invented by Arthur Lawrence Fox, Woodstown, N. J. Assigned to E. I. du Pont de Nemours & Company, Wilmington, Del. Application November 21, 1942. 15 claims.

2,369,667. PROCESS OF PREPARING A SULPHUR TYPE DYESTUFF which comprises reacting a polycyclic aromatic hydrocarbon with a complex compound. The latter is obtainable by heating aluminum chloride with substantially two moles of sulphur monochloride at elevated temperature and in the absence of a solvent. The coloring matters are useful like those of patent 2,369,666. Invented by Arthur Lawrence Fox, Woodstown, N. J. Assigned to E. I. du Pont de Nemours & Company, Wilmington, Del. Application November 21, 1942. 5 claims.

2,369,668. PROCESS OF PREPARING A SULPHUR TYPE DYESTUFF which comprises reacting a carbocyclic compound having at least one basic nitrogen atom with the complex compound obtained by reacting aluminum chloride with sulphur monochloride at elevated temperature and in the absence of a solvent. The coloring matters are useful like those of patent 2,369,666. Invented by Arthur Lawrence Fox, Woodstown, N. J. Assigned to E. I. du Pont de Nemours & Company, Wilmington, Del. Application November 21, 1942. 9 claims.

2,369,683. PREPARING RESINOUS MATERIAL. The process consists in first obtaining a monoglyceride product produced by esterification of equimolecular proportions of glycerine and an oil acid selected from the class consisting of drying and semi-drying oil fatty acids until the product has an acid number of 60-80. Then this product is heated with an equimolecular quantity of maleic anhydride at a temperature of 400 to 420° F. with agitation while slowly adding to the mixture an oil selected from the class consisting of drying and semi-drying oils. Temperature of about 410° F. is maintained throughout the addition of the oil and the rate of addition of the oil is slow enough to prevent separation of the product. The oils may be used in varnishes, enamels, printing inks and the like. Invented by Charles G. Moore, River Forest, Ill. Assigned to The Glidden Company, Cleveland, Ohio. Application November 8, 1941. 4 claims.

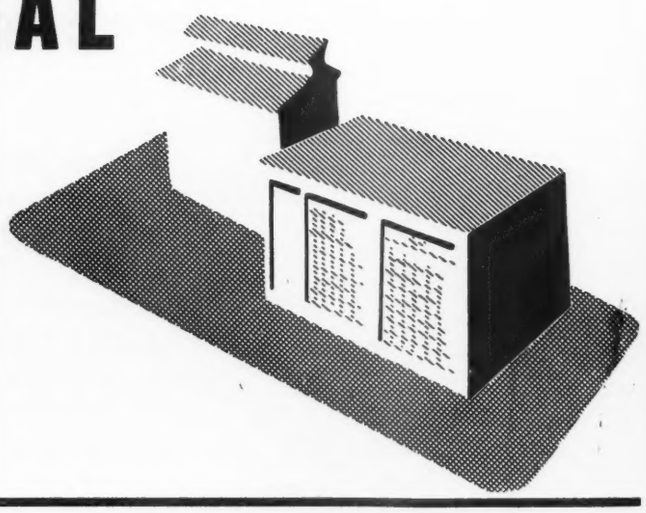
2,369,776. NITROGENOUS ORGANIC COMPOUNDS prepared by interacting a fatty-acyl urea (or a fatty alkyl urea or a fatty alkyl carbamate or allophanate) and formaldehyde (or a substance yielding formaldehyde) and a tertiary amine salt or an addition compound of a tertiary amine with an inorganic acid anhydride. The new compounds are believed to be quaternary ammonium salts and are useful in treating textiles, including wool, to render them soft, water-repellent and crease resistant. They are also useful in the resist printing of textiles. In this case the quaternary salt is added to the resist printing paste and fabric is printed in usual way, and then steamed to decompose the salt and produce water repellent areas on the cloth. Invented by Noel William Cusa, Charles Edward Salkeld, and Eric Everard Walker, Blackley, Manchester, England. Assigned to Imperial Chemical Industries, Ltd. Application June 28, 1938. 17 claims.

2,370,341. RED PIGMENTED COATING COMPOSITIONS, such as lithographic inks, paints, and lacquers. An azo pigment is used by coupling the diazo of 2-amino-6-chloro-toluene and the anilide of 2-hydroxy-3-naphthoic acid. A non-volatile film-forming vehicle is used. The pigment is useful in protective coatings for paper as well as wood, aluminum, brass, etc. Invented by Harold E. Woodward, Penns Grove, N. J. Assigned to E. I. du Pont de Nemours & Company, Wilmington, Del. Application July 28, 1943. 4 claims.

(*Continued on Page 46*)

Hamilton Equipment

is **ESSENTIAL**



Whatever kind of printing plant you operate, there is a requirement in it for Hamilton equipment. You may set type by hand or by machine, or you may buy all your composition "outside". Before type forms go to the press, necessary work must be done on them. This work is done best on Hamilton Type Cabinets and Hamilton Imposing Tables.

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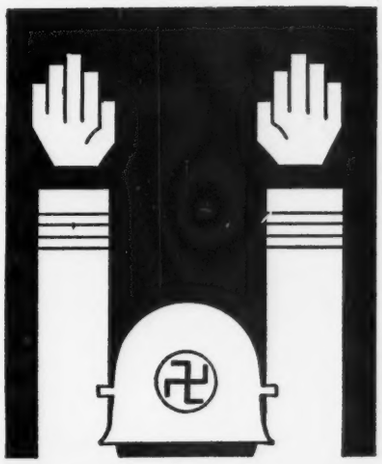

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But if everybody does the very best he can . . . it will end sooner than if we just coast along!

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On stock still available, or possible date delivery on new machines or replacement parts. For continued operation we suggest that you carefully check your equipment for worn parts and order at once such parts as may need replacement shortly. This will prevent costly delays due to breakdowns.

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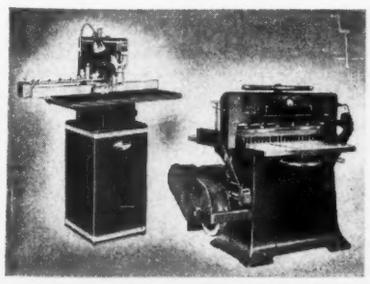

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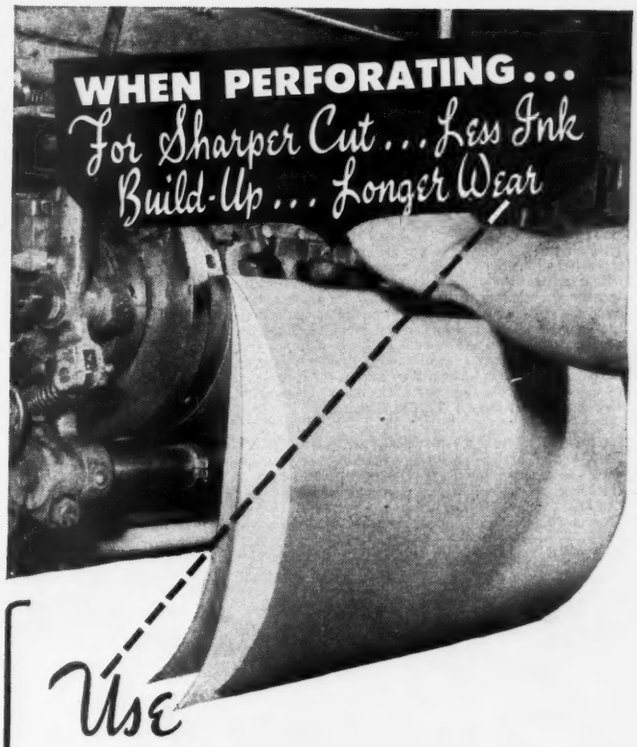

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2,370,537. WATER-SOLUBLE MONOAZO DYESTUFFS suitable for dyeing and printing acetate artificial silk, wool, silk, and otger materials. They are produced by coupling a diazotized p-amino-phenyl-hydroxyalkyl ether sulphuric ester, which may carry substituents other than nuclear sulphonic, carboxyl or acidylamino groups, with a phenol capable of coupling and substituted in the 4-position by a hydrocarbon residue containing at least two and not more than eight carbon atoms, which hydrocarbon residue is selected from the groups alkyl, aralkyl, cycloalkyl and aryl. Invented by Basil Jason Heywood, Arthur Howard Knight, and Morvan Lapworth, Blackley, Manchester, England. Assigned to Imperial Chemical Industries Ltd. Application May 27, 1943. 5 claims.

2,370,786. PREPARATION OF SULPHONYL CHLORIDE DERIVATIVES. The process comprises reacting a saturated aliphatic or alicyclic ester of a pnosphorus acid with admixed sulphur dioxide and chloride while irradiating the reaction zone with active lignt. The products have many uses such as: improving printing pastes, in the preparation of lakes and inorganic pigments, as dispersing agents, textile treating agents such as mothproofing, fireproofing, and metal corrosion inhibitors and cleaners. Invented by Arthur L. Fox, Woodstown, N. J. Assigned to E. I. du Pont de Nemours & Company, Wilmington, Del. Application August 27, 1940. 3 claims.

2,371,101; 2,371,102; 2,371,103; 2,371,104. NEW PRINTING ASSISTANTS which may be added to printing-color pastes at any point; may be incorporated into the thickener; into the dye pastes or powders or may be blended directly into the printing color paste. They do not cause deterioration of printing pastes on standing and encourage the production of excellent color yields even under hot ageing conditions. Typical examples are, in patent 2,371,101—N-ethanol beta-anthraquinone sulfonamide; in patent 2,371,102—N,N' di-(alpha-anthraquinonyl) fumaric acid diamide; in patent 2,371,103—N(alpha anthraquinonyl) N' ethanol diamide of fumaric acid; and in patent 2,371,104—N,N" – di (beta-aminoethyl) succinamide. Invented by Roy Herman Kienle, Chester Albert Amick, and Alfred Louis Peiker, Bound Brook, N. J. Assigned to American Cyanamid Company, New York, N. Y. Applications July 1, 1943. 10 claims, 10 claims, 11 claims, and 6 claims, respectively.

2,371,212. MODIFIED SHELLAC PRODUCT which is useful in inks, adhesives, varnish for paper, and for other purposes. The shellac is heated at 110° C. or above in the presence of a condensation catalyst such as p-toluene sulfonic acid, with at least 10% of its weight of an aliphatic polyamine such as ethylene diamine, propylene diamine, diamino pentane, etc. The shellac product may then be dissolved in water containing acetic, propionic, hydrochloric or other acids. Invented by Henry Hall Bassford, Jr., Brooklyn, and William Howlett Gardner, Bayside, N. Y. Unassigned. Application May 28, 1942. 5 claims.

2,371,235. LIGHT COLORED SHELLAC COMPOSITION useful in inks, adhesives, varnishes for paper and for other purposes. The light-colored wax-free flexible resins are prepared by reacting bleached refined shellac with polyhydric alcohols in the presence of another resin which acts as a mutual solvent for the shellac and alcohol. Invented by William Howlett Gardner, Bayside, and Henry Hall Bassford, Jr., Brooklyn, N. Y. Unassigned. Application May 28, 1942. 7 claims.

Printing Presses and Equipment:

2,369,814. INKING SYSTEM for use with high speed rotary printing presses in which a fountain roller is slowly rotated in a fountain partially filled with ink. Cooperating with the fountain roller, but out of contact with it, is a roller for receiving ink from the surface of fountain roller and transmitting it to the ink distributing and form inking rollers and drums. The receiving roller also serves to control accurately the amount of ink fed to the distributing drums and inking rollers as well as to reduce the rate at which the ink is fed so that a thin uniform film of ink may be maintained on the distributing drums and the form inking rollers in spite of the thick film of ink which is picked up from fountain. To further control the amount of ink fed from fountain to the plates, a gate knife is used which may be variably positioned to vary the gap between it and the surface of the fountain roller. Invented by Emory W. Worthington, Chicago, Ill. Assigned to The Goss Printing Press Company, Chicago, Ill. Application November 14, 1940. 7 claims.

2,370,117. CLAMPING JAW for a printing plate holder in one position may be used as a "right" and abut one edge of a printing plate, or upon being inverted in position, may be used as a "left" to abut an edge of the plate that extends at right angles to the edge clamped when jaw is used as a "right." Its lateral vertical section is of rhomboid shape with beveled side edges. A hole extends medially through it with counterbores on both ends of hole for receiving the head of an attaching screw when jaw is either upright or inverted. Both upper and lower surfaces of jaw have grooves engaging shoulders extending diagonally in parallel alignment. Shoulders extend out beyond the obtuse angled corner edges of jaw to interlock underneath a printing plate and are flush at the acute angled edges. Invented by Lee Augustine, Cincinnati, Ohio. Assigned to The Printing Machinery Co., Cincinnati, Ohio. Application November 20, 1943. 8 claims.

2,370,591. SHEET HOLD-DOWN DEVICE for platen printing presses which retains a printed sheet against flip-up, after release by grippers and gripper fingers, during the entire time of descent of platen. A rigid member reciprocates in a plane paralleling the sheet-supporting surface of platen and a normally upwardly-extending arm is pivotally connected with this member. Means to engage, and be depressed by, a movable portion of press, includes a normally upright lever operatively connected with the arm. An L-shaped combined horizontal base and upright support is provided for member, arm and lever, with the lever being pivoted in base and the member slidably carried by and normally projecting beyond the support. The lever may be moved to an upright position after release by a movable portion of the press. Invented by Harry L. Thompson, Cooperstown, N. Dak. Unassigned. Application May 6, 1943. 4 claims.

2,371,223. INKING MECHANISM FOR AN INTAGLIO PRINTING PRESS. The ink trough encloses the lower part of intaglio design cylinder and comprises a pair of semi-trough members abutting along a line lengthwise of the trough. One member is secured to the upper part of side wall for outward pivotal movement, and the other member is pivotally mounted for upward movement. Invented by Curtis S. Crafts, Oak Park, Ill. Assigned to The Goss Printing Press Company, Chicago, Ill. Application March 30, 1943. 9 claims.

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Munsey Bldg., Washington, D. C

Appoints New Mechanical Committee

G. Albert Stewart, publisher, Clearfield, (Pa.) *Progress*, president of the Pennsylvania Newspaper Publishers Association has appointed a new Mechanical Committee for the Association, with L. W. Barnes, general manager of the Johnstown *Tribune* and the *Democrat*, as chairman. Other members: N. M. Fellman, Chester *Times*, vice chairman; Lester H. Butler, Harrisburg *Telegraph*; S. D. Evans, Lebanon *News-Times*; George C. Stevens, Scranton *Times*; R. R. Cranmer, *Grit*, Williamsport; D. O. Nelson, Altoona *Mirror*; D. Philip Young, York *Dispatch*; M. L. Detwiler, Lancaster Newspapers, Inc.; N. DeWitt Ray, Indiana Evenine *Gazette*; Edward Case, *Valley Daily News*, Tarentum; M. T. Alderman, Sharon *Herald*; Joseph B. Breslin, Bethlehem *Globe-Times*; E. O. Davies, Harrisburg *Patriot* and *Evening News*; Alan Kistler, Wilkes-Barre Newspapers.

TAKE ACTION Today ABOUT
Summer
ROLLERS
AND FOR THIS SEASON GET
american
PRE-CONDITIONED QUALITY
KNOWN FOR BETTER SERVICE;
USED BY LEADING PRINTERS
Manufacturers of
ALL-SYNTHETIC
RUBBER ROLLERS
COMPOSITION ROLLERS
LITHOGRAPH ROLLERS
MAKEREADY PASTE
PADDING GLUE
Wise printers are preparing to produce faultless press-work throughout the summer by having AMERICAN ROLLERS on hand for the hot weather grind. Why don't you try them this season? You'll like these par-excellent rollers. They're pre-conditioned for efficient, trouble-free summer-time service. That means we've given them everything it takes to stand the toughest temperatures. You'll find them durable, dependable, capable. Produced by skilled roller craftsmen in one of today's most modern roller plants, there's no finer printer's roller anywhere. Change to AMERICAN ROLLERS for real service this summer. Order yours today.
AMERICAN ALL-SYNTHETIC RUBBER ROLLERS
Making a great name for itself in leading plants is our new ALL-SYNTHETIC RUBBER ROLLER. Laboratory tests showed it to have remarkable efficiency and actual performance on magazine, newspaper, rotary and offset presses is giving it a reputation for splendid all-around dependability. Built to mathematical exactness and stays so. Handles ink beautifully. Induces clean, sharp presswork. Stands up to its job in every kind of temperature. Investigate. Order a set. See for yourself.
FOR VICTORY
BUY
UNITED STATES SAVINGS BONDS AND STAMPS
AMERICAN ROLLER COMPANY
1342 NORTH HALSTED STREET . . . . . CHICAGO, ILLINOIS
225 NORTH NEW JERSEY STREET, INDIANAPOLIS, INDIANA

Booth's Zink Cut Cement prices in the United States: 75c per tube; $6.00 per dozen tubes; $5.00 per dozen tubes in gross lots.

Booth's Zink Cut Cement

is not a "household" cement. It is made for one purpose only—that of fastening all kinds of cuts to wood or metal base. Being a one-purpose cement, it does its work well. Have you tried it? If not, send for one tube at 75c.

Retain Their Popularity

A great many keyboard rubber roll shafts on line-composing machines throughout the country are equipped with Booth's Black Rubber Rolls. They are dependable, concentric throughout their length and maintain maximum resiliency for life. $1.45 per pair; $7.75 per dozen rolls.

E. A. BOOTH
RUBBER COMPANY
364 ROCKEFELLER BUILDING · CLEVELAND, OHIO

The "STAR" Viewpoint

IT IS NOT EASY, with rapid growth, to maintain the same "Customer's Viewpoint" with which a new and properly conceived business venture first begins. But this Company prides itself on the fact that it has kept "down-to-earth" in all its thinking and planning.

Thus we have sought to maintain intimate contact with the thoughts of Composing Room executives, machinists and operators, with respect to operation of their typesetting machines. This contact has had a direct influence on the success of mechanical and material improvements we have brought to Composing Rooms in the past and will continue to bring in the future. In fact, many of these sound improvements have originated from these practical men as actual inventions or ideas, — both developed by us.

Every individual in this organization, whether in the field or in the factory, is imbued with the same idea: "Customer satisfaction comes first."

For the Engineer this means that drawing-board dreams are out; he must have the practical approach to his problem by finding out what the machinist thinks, and how the operator uses the part he is making. For the salesman it means a constant check on performance of "STAR" parts with the Machinist and Operator. For the man in the office, from Executive to Shipping Clerk, it means constant vigilance to see that no morass of detail keeps orders from receiving prompt attention.

Again we remind our friends to understand that, though the war has intervened to prevent us from keeping to the same high standards of service and the same intimate contact as before, immediately the war is won, we shall take up where we left off.

A group of ACE BELTS, (all types) turned in by one plant, showed use ranging from 2 years, 8 months to 8 years, 1 month.

PRECISION
TRADE ★ MARK
LINOTYPE PARTS COMPANY
Factory and Main Office:
WEATHERLY, PA.
Branch Office: 314 WEST 10th STREET, KANSAS CITY 6, MO.
CHICAGO · MINNEAPOLIS · DENVER

EXECUTIVE Qs

George M. Ginn, who for some time has been superintendent of the Ohio State University Press in Columbus, Ohio, is now Superintendent of the Florida Press, 143 East Church St., Orlando, Fla. Mr. Ginn has been active in the Columbus Craftsmen's Club. He has purchased a home in Orlando.

J. M. Huber, Inc. has announced the passing of Louis Lundquist on March 17 after a lingering illness. Mr. Lundquist had served as superintendent of the Huber factory in Bayonne, N. J., and had been with the firm for 35 years.

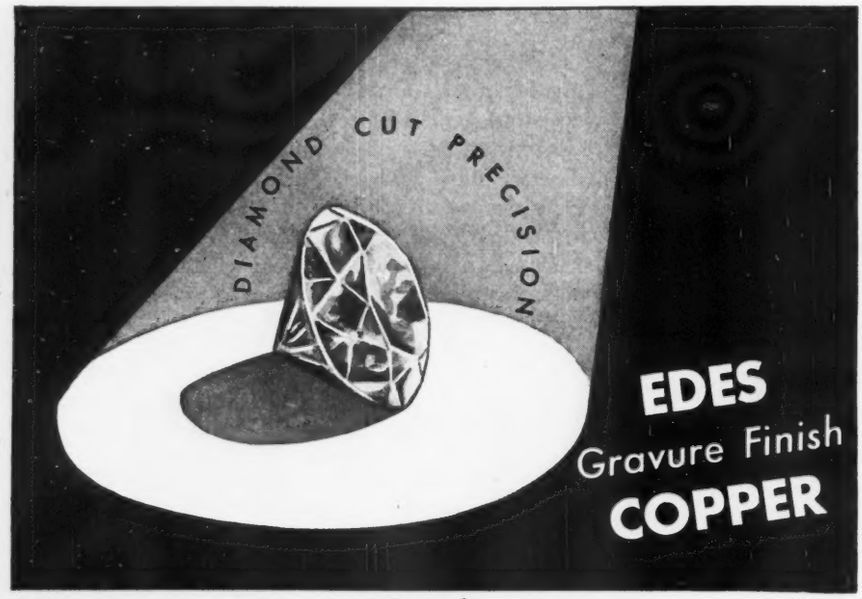
J. Howard Houston, general manager of Eagle Printing Ink Company, Division of General Printing Ink Corporation, announces that Edward A. Luedke has resumed his duties as sales manager. Since May, 1942 when Mr. Luedke returned to active service as a major, he has spent over 19 months overseas with the Allied Forces Headquarters in North Africa and Italy.

A. S. Harris, President of Harris-Seybold-Potter Company has been notified by the War Department that his older son, S/Sgt. Alfred Stull Harris, Jr., 27 years of age, was killed on Luzon on February 4. After attending Miami University and Kenyon College, Sgt. Harris was employed at the Harris plant at Cleveland. On March 1, 1941, he enlisted in Troop A of the 107th Cavalry, a Cleveland unit of the Ohio National Guard. Many of his boyhood friends and associates were with him in the 107th. He was transferred to the 22nd Cavalry Division and went overseas to New Guinea with a replacement group in September of 1944. He joined the 1st Cavalry, taking part in the campaign on Leyte, and moved on for the invasion of Luzon and the subsequent capture of Manila. Sgt. Harris was the grandson of the late A. F. Harris, one of the founders of the Harris Company. Sgt. Harris is survived by his father and mother, Mr. and Mrs. A. S. Harris; a sister, Mrs. Roger Williams—whose husband is in the South Pacific with the Navy; his brother Charles; also Sandra and David Williams, his niece and nephew.

S/Sgt. A. S. Harris, Jr., was killed Feb. 4, on Luzon. He was older son of A. S. Harris, Sr.

William Clement Glass, 58, manager of Champlain Co., Inc., subsidiary of the Fred Goat Co., Inc., at 636 Eleventh Ave., New York, passed away at the Post-Graduate Hospital on March 12. Mr. Glass was well known among printing executives throughout the country. He was one of the founders of the Printing Division of the American Society of Mechanical Engineers which had a prominent voice in technical affairs of the industry for a number of years. Mr. Glass was a licensed professional engineer. He was a writer and lecturer on engineering and Graphic Arts subjects. He was born in Cambridge, Mass., and was graduated from Ryndge Technical School and Harvard University. Commencing in 1928 he was manager of the New York office for the Kidder Press Co. The office was closed in 1942 and he then was associated with American Type Founders for two years, joining the Champlain Co., Inc., about a year ago. Mr. Glass was an inventor in his own right, he having designed the first automatic cutter and creaser feeder. He was also recognized for his sponsorship of a system for the control of engineering, manufacturing, stock room and cost departments.

(*Continued on Next Page*)



GRAVURE FINISH COPPER

and BUFFED COPPER

SURFACE ROUGHNESS
MAGNIFIED Vertical 5000, Horizontal 5

Reduces ESTIMATING HAZARDS

Estimators can *figure* every item but makeready. They still have to guess on that.

Edes Gravure Finish Copper minimizes guessing by minimizing makeready.

Plate thickness can be guaranteed absolute within .0005"!

Flatness is comparably absolute because of diamond cutting rather than pumice polishing. Diamond cutting is a patented process, exclusive with us.

These, and other superiorities, minimize makeready for halftones on Edes Gravure Finish Copper. You will find this an effective salesmaking fact.

THE Edes MANUFACTURING COMPANY
PLYMOUTH, Established 1850 MASS., U.S.A.
AUTHORIZED REPRESENTATIVES
CHICAGO: Chemco Photoproducts Co.
NEW ORLEANS: Chemco Photoproducts Co.
ST. LOUIS: Mid-West Photo-Eng. Supply Co.
WASH., D. C.: E. H. Walker Supply Co.
RICHMOND, VA.: E. H. Walker Supply Co.
BOSTON: Allan B. Croke Co.
BUFFALO: C. S. Illingworth
DETROIT: R. L. Porter
CINCINNATI: G. C. Dom Supply Co.
SAN FRANCISCO: J. W. Feinstein
ATLANTA: Chemco Photoproducts Co.
Thompson-Hayward Chemical Co.
DENVER, MINNEAPOLIS, TULSA, WICHITA, MEMPHIS, DALLAS, OMAHA, KANSAS CITY, OKLAHOMA CITY, DES MOINES, HOUSTON, SAN ANTONIO

Case Histories Proving the Power of the Press

WUXTRY!

Read all the reasons why the Buffalo

COURIER-EXPRESS

is Directomatted

"The DIRECTOMAT is a practical method for producing mats in half the time."

C. W. GOVIER
Production Manager
Buffalo Courier-Express

- Mats are made on the DIRECTOMAT with twice the speed of your present operation—7 seconds for pressure application—15 seconds for entire molding operation.
- The DIRECTOMAT is capable of producing mats with the same shrinkage you now get.
- The DIRECTOMAT eliminates stretch of mats.
- The DIRECTOMAT produces more uniform, deeper and sharper mats.
- Mats are molded on the DIRECTOMAT with less pressure, thereby reducing type wear, and saving from 60% to 80% of resetting.
- The DIRECTOMAT virtually eliminates chance of buckle in the mat.
- DIRECTOMATS produce a cleaner cast and definitely better printed results.

Write for complete details—568 Kenmore Station.

LAKE ERIE
ENGINEERING CORP.
BUFFALO, N.Y. U.S.A.

Why Bookkeepers like the
PLUS PLAN

We know that bookkeepers, accountants and auditors are not concerned with the functioning of type metal, but they are concerned with its cost. They find that when a superintendent "Imperializes" his plant with the PLUS PLAN and has his metal analyzed regularly, it is a "cinch" to figure type metal depreciation and a pleasure to show owners a lower yearly type metal cost . . . All because the PLUS PLAN is the most dependable and economical control ever devised to keep type metal up to par . . . May we send you the details of this plan?

IMPERIAL TYPE METAL CO.

Serving the Graphic Arts Industry Only

PHILADELPHIA NEW YORK CHICAGO

Imperial

On Washington's birthday, George Willens, of George Willens & Co., Detroit advertising typographers, had a party for his staff at Hotel Fort Shelby. Nine employees who have been with the company for 20 years or more were presented with gold watches as tokens of their membership in the newly established Willens 20-Year Club. Recipients were: Harold Ashforth, Blanche Deadman, Jack Denison, William Goldberg, Arnold Kulberg, James Philip and Emmet Young. Young David Povlitz was presented a watch in memory of his father Clarence, who died four years ago after 24 years with Willens. Mr. Willens announced that the Washington Birthday party and watch presentation will be an annual event.

Effective March 5, The Morley Company announced that Don Eastman assumed the position of sales promotion manager. His work in the newly created position will be confined for the most part to sales promotion, advertising and market research which is quite extensive due to the many and varied products manufactured by The Morley Co. Mr. Eastman, over the past 10 years, has been associated with several advertising agencies as well as two large publishing houses.

Simon Ghertner, president of Cullom & Ghertner Company, Nashville, Tenn., passed away on Tuesday, February 6.

James E. Slaughter has been named director of advertising and public relations for E. J. Kelly Company, printing and lithographic ink manufacturers, Kalamazoo, Mich. Formerly advertising manager, he will have charge of public relations, advertising, publicity and direct-mail sales. Mr. Slaughter joined the Kelly Company in 1938 after attending Western Michigan College. Before being appointed advertising manager in 1943, he was a sales representative for his firm in Ohio, West Virginia and Kentucky.

James E. Slaughter has been named director of advertising and public relations for E. J. Kelly Co.

Succeeding J. R. Curtis who has resigned, Robert W. Sulzer has been named manager of the Atlanta, Georgia branch of the International Printing Ink Division of Interchemical Corporation. Mr. Sulzer has been with IPI for twelve years. He was a salesman in the Cincinnati branch office for many years and has been the Baltimore branch manager since January 1, 1944. E. B. Perry will take over the position of manager of the Baltimore branch. Mr. Perry has been on the sales staff of the Philadelphia branch and is well known in the territory. He was previously with IPI in Chicago and Brooklyn and has been with the company for fourteen years.

R. W. Sulzer E. B. Perry

Frank E. Holbrook, former Mill Manager of the Oxford Miami Paper Company, West Carrollton, Ohio, a subsidiary of the Oxford Paper Company, Rumford, Maine, died n Dayton, Ohio, on February 27th, at the age of 68. Mr. Holbrook had been engaged in the paper-

● When stereo men go "All Out" for a particular mat as they have for Burgess Chrome Mats, there's a definite reason. Not only do these laboratory tested mats produce type and halftones with utmost fidelity but they're also surprisingly easy to manipulate. Yes, sir . . . they definitely have "Something On The Ball."

BURGESS CELLULOSE COMPANY
Manufacturers and Distributors of Burgess Chrome and Tone-Tex Mats
FREEPORT • ILLINOIS
Pacific Coast Representative
RALPH LEBER CO., 426 Polson Bldg., SEATTLE, WASH

YOU CAN'T GET A NEWSPAPER PRESS, *But You Can Get* NEW BLANKETS *and* BACKING FELT

Perhaps you can't get a new newspaper press to improve your printing, but you can get new and better molding blankets and a better gummed backing felt which will improve your printing. We suggest that you send in now for Eastern Tru-Mold Cork Molding Blankets and "Flecto" Gummed Backing Felt.

Eastern TRUMOLD Cork Molding Blankets have the correct percentage of Bakelite incorporated in the cork composition binder to insure perfect density. That's why they permit sharper impressions. And this blanket has greater flexibility to hold edge-cracking to a minimum.

TRU-MOLDS are now available in "Medium," "Medium-Hard" and "Hard" density.

Sizes	1/4" Each	5/16" Each	3/8" Each	3/16" Each
20" x 24"	$2.50	$3.75	$4.50	.....
21" x 25"	2.75	4.00	4.75	$2.50
22" x 26"	3.00	4.25	5.00	.....

(One size only on 3/16"—21" x 25")

"FLECTO" GUMMED BACKING FELT sticks fast on any mat, regardless of heat used in scorching. Its adhesive will not crack, peel, slip or crystallize.

More than that, you can tear "Flecto" easily and cleanly, without ragged edges.

Each and every sheet is gauged accurately and uniformly throughout and will not peel or separate in layers.

"Flecto" is soft and pliable, assuring conformity to the mat and easy shrinking with the mat.

GAUGES AND SIZES

Gauges .021, .025, .030 (Green) sheeted 18" x 24".

Gauge .035 (Red) sheeted 18" x 24".

Gauges .040, .045 (Green) sheeted 18" x 22".

Gauges .050, .060 (Gray) sheeted 18" x 22".

Cut into strips 9" or 18" long and 1/8" to 1" wide at no extra charge.

EASTERN NEWSPAPER SUPPLY CO.

9603 NORTHERN BOULEVARD — CORONA, L. I., NEW YORK

With or Without 8000 lb. Valve Controlled Melting Pot

Hammond Easy Kaster 8

The fastest and most accurate automatic locking flat caster made . . .

At war "today"

At your service "tomorrow"

Hammond Machinery Builders INC.

KALAMAZOO 54, MICHIGAN

1604 DOUGLAS AVENUE

Eastern Branch 71 West 23rd St., New York 10, N. Y.

making industry for forty-five years at the t me he retired, in July, 1942. He joined the Oxford Paper Company family in 1929 when he wa: made Mill Manager of the Oxford Miami Paper Company in West Carrollton, a position which he held until his retirement.

Consolidated Subsidiaries

T. R. Jones, chairman and president of American Type Founders, has announced consolidation of two subsidiaries, the Philharmonic Radio Corporation and the Remote Control Division. Zeus Soucek is president of the new organization.

The Remote Control Division will, as at present, be fully engaged in the production of precision remote controls for Navy Communications equipment. Peacetime application of similar devices is planned for industrial uses as well as for home radio equipment. It will continue under the management of M. H. Hoepli.

WPB News and Notes

Issues Instruction Pamphlet for WPB-1319

The War Production Board has issued a revised 8 page pamphlet entitled "WPB-1319 Instructions" in which information is given for filling out Form WPB-1319 when applying to WPB for permission to transact in equipment. The pamphlet may be obtained from any WPB office.

Among the WPB Orders in connection with which Form WPB-1319 must be used are: L-226 New printing trades machinery; L-54-a New portable and non-portable typewriters; L-176 Domestic and commercial electric fans; L-190 New scales, balances and weights; L-267 New photographic equipment and accessories; L-325 New 35-mm projection equipment and accessories; Priorities Regulation 24, any equipment, whether listed in this pamphlet or not, for which a preference rating is sought under the regulation.

Controls on Tin Tightened (M-43)

WITH Government reserves of tin down to dangerously low level, the War Production Board has again revised Order M-43 to tighten up on the less essential uses for the metal, the agency announced on March 8. Also, parts of the order have been clarified and new purchase certifications have been added.

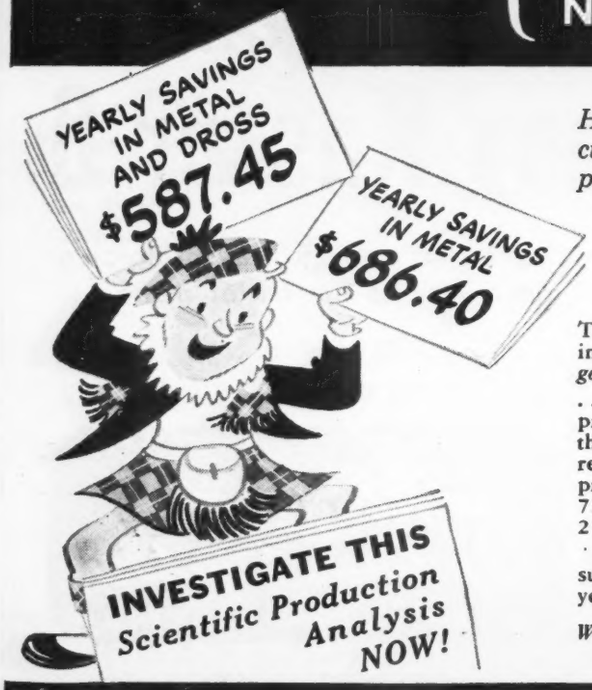
"We have no native tin production", officials of WPB's Tin, Lead, Zinc Division stated. They also disclosed that current imports from South America and elsewhere amount to less than 75% of pre ent requirements with the results that Government stockpiles are being depleted at an alarming rate. Before the war, this country imported about 90% of its pig tin requirements from the Malayan States and the East Indies, it was stated. These are now in Japanese hands and government officials estimated that as much as two years may elapse after these mines are recovered before any tin in quantity may be expected.

Above-Average Paper Inventories May Help Less Fortunate

ANTICIPATING a reduction in the amount of printing paper that can be produced from the reduced pulp supply expected during the second calendar quarter of 1945, representatives of the magazine publishing industry and the commercial printing industry have recommended to the War Production Board that the shortage be met by a corresponding cut in the quantity of paper delivered to these two industries, WPB announced on March 2.

Surveys conducted in the two industries indicate that a majority of magazine publishers and commercial printe:s have sufficient paper supply on hand to permit the required curtailment of their second quarter deliveries witho t a further reduction in their permitted usage.

SURVEY SHOWS { MONOMELT SAVES NEWSPAPER $1273.68 PER YEAR



Here's what MONOMELT did in ONE year's time to cut type metal and type handling costs in a newspaper plant where 17 type casting machines were in use.

- Money saved in type metal and dross..... **$587.48**
- Money saved in labor and handling..... **686.20**

Total yearly saving: **$1273.68**

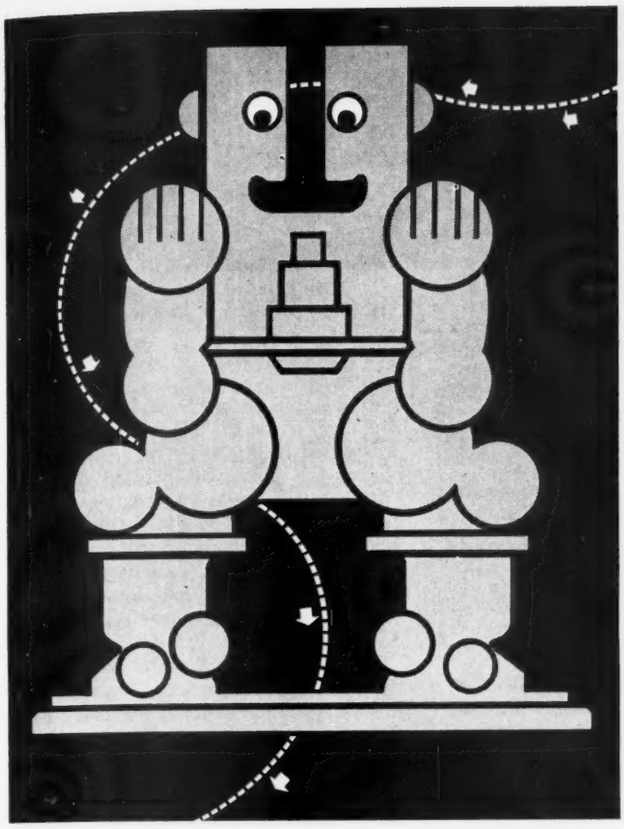
These total savings, compared with the original cost of Monomelt installation, offer emphatic proof that the Monomelt System is a *good* business investment.

. . . And with MONOMELT, each slug is uniformly cast because properly balanced type metal is automatically supplied at exactly the right temperature. In fact, MONOMELT makes it possible to reduce operating temperatures at least 35 to 50 degrees below present practice. This allows faster casting and reduces dross 75%. In addition MONOMELT increases production by 10 to 25% and saves time, labor and floor space.

A special engineer and cost accountant will be glad to make a survey of your plant to determine if Monomelt System can cut your composing room costs and to just what extent.

Write today for more information about the MONOMELT plant survey.

MONOMELT COMPANY 1611 POLK STREET NORTHEAST MINNEAPOLIS 13, MINNESOTA



What the well dressed newspaper press will wear-

VULCAN PRESS BLANKETS

For presswork that gives the printed page more snap . . . . greater clarity and crispness, VULCAN top and bottom Press Blankets can be relied upon.

Even under wartime restrictions on materials, VULCAN research and ingenuity are creating press blankets unsurpassed for the ideal combination of physical characteristics preferred by pressroom executives . . . . the right degree of resilience . . . . freedom from bolstering and ghosting . . . . assurance of long service life.

Dress your press for long runs, uninterrupted by blanket trouble. Turn to VULCAN Blankets for improved presswork.

VULCAN
PROOFING COMPANY
First Avenue and Fifty-Eighth Street
Brooklyn, 20, N. Y.

BEST IN THE LONG RUN

TRUMOLD COMMERCIAL
MORLEY
TRUTONE
MATS
TRUTEX DIRECT PRESSURE

Morley Trutone Mats
have eye appeal too! They make
a deeper, more lasting impression...
Naturally Trutone Mats are best
in the long run.

THE MORLEY COMPANY
1890 TRADITION—1945 EFFICIENCY
PORTSMOUTH, NEW HAMPSHIRE

ARMY-E-NAVY

NEW YORK	CHICAGO	BALTIMORE
23-25 E. 26th Street	538 So. Wells Street	404 W. Baltimore Street

Publishers and printers with above-average inventories were reported as willing to accept additional curtailments in the amount of paper delivered and thus make available a larger supply for those less fortunate.

The task committee for both industries was authorized to continue studies of the problems arising from the shortage and to advise with WPB in working out procedures.

FOUR Michigan newspapers—the Detroit *Free Press*, Kalamazoo *Gazette*, *Monitor Leader* (Mount Clemens) and Muskegon *Chronicle*—were cited by the War Production Board for overuse of newsprint paper totaling 137,559 lbs. in 1943 and 1944, WPB's Compliance Division reported on March 22.

Publishers of the four newspapers admitted their violation of WPB Limitation Order L-240, which restricts the delivery and use of print paper, the Compliance Division said. Three of them agreed to reduce paper quotas for the first quarter of 1945; the fourth (Muskegon *Chronicle*) must reduce second quarter newsprint usage.

Reductions are as follows:

Publisher	Newspaper	Reduction (lbs.)
Knight Newspapers, Inc. (an Ohio corporation)	Detroit *Free Press*	45,140
Booth Newspapers, Inc. Kalamazoo, Mich.	Kalamazoo *Gazette*	41,720
Booth Newspapers, Inc.	Muskegon *Chronicle*	12,649
Macomb Publishing Co., Mount Clemens, Mich.	Monitor *Leader*	38,050

Fewer Bags and Certain Papers

THERE probably will be fewer paper grocery and variety bags, shipping sacks, wrapping papers, envelopes and certain converting papers available to the public in the second quarter of this year, members of the Kraft, Special Industrial and Sulphite Paper Industry Advisory Committees were told by War Production Board officials at a recent joint session, WPB reported on March 1.

Shortages of domestic wood pulp for the second quarter, beginning April 1, require a curtailment in allocations to manufacturers of civilian Kraft, special industrial and sulphite paper, WPB officials said.

WPB officials pointed out that the proposed curtailments of pulp were not final, but would be carefully considered before being put into effect in the second quarter. It was also stated that curtailments in other segments of the paper industry would be considered shortly by advisory committees representative of the manufacturers involved.

Must Reduce Newsprint Consumption

THE Seattle (Wash.) *Times*, a daily and Sunday newspaper, has been ordered by the War Production Board to reduce its consumption of newsprint by 284 T. during the last three calendar quarters of 1945, the Compliance Division of WPB reported on March 14.

Suspension Order S-740 states that the newspaper, published by the Seattle Times Company, must make a quota payback of not less than 90 T. of newsprint paper for each of the last three calendar quarters of 1945 because of the overuse of 284 T. of paper consumed during the first quarter of 1944.

Form WPB-541 Has Been Streamlined

IN a move to save paper as well as to simplify the processing of priority applications, the War Production Board has "streamlined" Form WPB-541, the general purpose application form for priority assistance, WPB announced on March 19. The new form comprises two pages instead of four as previously.

This application blank, which is used whenever a special priorities form is not prescribed by an order or regulation, is one of the most widely used in WPB. Formerly known as PD-1A, this form is used in the majority of cases by anybody who does not have a priority rating and needs one. For many months these applications have been flowing into WPB field offices for processing at the rate of nearly 3,000 per day.

Since the form must be filled out in triplicate, approximately a quarter of a million copies per month are being used. By cutting the size of the form 50 per cent, enormous savings will be effected in paper consumption, printing, transportation, storage space, and processing time. In addition, the simplified version will save applicants time and effort.

With the new style form, WPB will initiate the policy of keeping the original application and returning a duplicate

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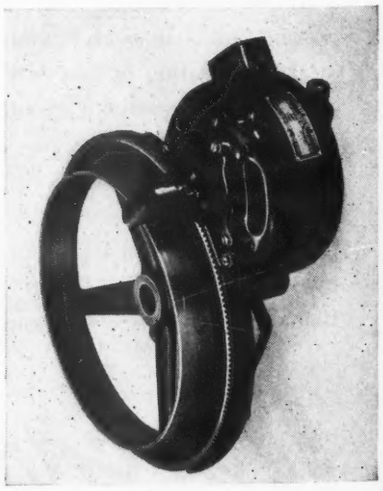

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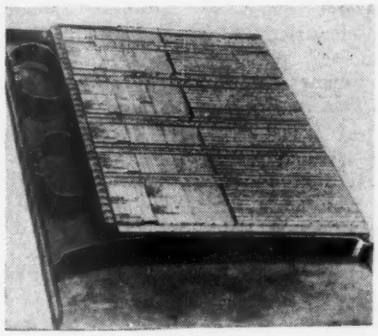

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for the applicant's records. Although the new forms have been distributed to all field offices, no definite cut-off day for the old form has been set. For the present WPB offices will continue to accept and process applications on the old forms.

Recent WPB Revisions

A brief summary of revisions, modifications and relaxations of WPB Orders affecting the Graphic Arts Industries has been compiled and is presented below. Those persons wanting further information regarding any order with which they are not familiar may obtain it through the usual source.

L-240 Amended—Issued March 24 by Printing and Publishing Div. Title "Newspapers". Clarifies manner of determining whether publisher issues separate newspapers or separate editions of same paper; makes reductions in delivery and use quotas applicable to second quarter of 1945; extends time of inventory ceiling to June 30, 1945.

Lead—Amendment M-38 (1-19-45)—Further tightening on less essential civilian uses for lead to allow for war needs was announced.

Newsprint—Direction 5 to L-240 (1-20-45)—Two methods for computing their base tonnage of newsprint under the order were offered newspaper publishers. Previously there was no specific method for figuring these tonnages. Which ever method the publisher selects, he must continue to use thereafter.

Paper Shipping Sacks—Amendment L-279 (1-6-45)—Use of more paper shipping sacks than were used in 1944 for packaging such animal feeds as fish meal, fish scrap, tankage and meat scrap was prohibited.

Phthalic Anhydride — Amendment Schedule 67, M-300 (1-3-45)—Except for the 10-pound small-order exemption, no phthalic anhydride can be sold without WPB authorization.

Tin—Direction 1 to M-43 (1-27-45)—All outstanding authorizations for the use of tin that existed prior to September 1, 1944, were cancelled in a new step to conserve a diminishing tin stockpile. On December 30, 1944, WPB stopped the sale of jewelry containing tin, effective March 1, 1945.

Freon 12—Amendment M-28 (1-30-45)—Production of Freon 12 (Dichlorodifluoromethane) was increased and stabilized sufficiently to permit a relaxation in restrictions on its use in refrigeration and air conditioning systems.

Glassine, Greaseproof and Vegetable Parchment Papers — Amendment M-286 (1-31-45)—Restrictive order on glassine, greaseproof and vegetable parchment papers (specialty papers) simplified and clarified; use as substitute for other materials, including Holland cloths, specified.

Governmental Commercial Printing and Duplicating—Amendment L-340 (1-22-45)—No statement regarding manpower need be filed in making appeals under the order.

Paper Food Container Stock and Condenser Tissue—Direction 1 to M-241-a (1-23-45)—Purchasers of condenser tissue or sanitary food container stock under M-241 were relieved of the necessity of furnishing their suppliers the certificates of compliance prescribed in Paragraph (i) of the order.

Paper Stationery and Papeteries—Inperpretation 4 to M-241-a (1-20-45)—These items were removed from the order's restrictions by their deletion from List B.

Printers, Newspaper and Book Publishers—Amendments L-241, L-240, L-245 (1-2-45)—Commercial printers and newspaper and book publishers are no longer required to file a statement regarding manpower on Form-3820, or a letter of explanation in lieu of the form when appealing for extra quota print paper.

Printing Plates—Amendment M-339 (1-11-45)—Persons who do not have

quotas zinc or copper for the production of printing plates under the order and find it impracticable to carry on business under existing restrictions have been granted permission by WPB to apply for a quota by letter.

Vegetable Parchment Paper—Amendment M-286 (1-31-45)—Restrictions covering the use of glassine, greaseproof and vegetable parchment papers were simplified and clarified.

L-245 Amended—Issued Feb. 2, 1945, by Printing and Publishing. Title "Books and booklets". Limits carry-over privileges; restricts further processing or distribution of magazines printed in violation; restricts use of paper for reprinting.

L-244 Amended—Issued Feb. 5, 1945, by Printing and Publishing. Title "Magazines and periodicals". Limits carry-over privileges; restricts further processing or distribution of magazines printed in violation; extends Army allotments to magazines purchased by Army; eliminates necessity of WPB-3820.

L-244, Dir. 1 Revoked—Issued Feb. 5, 1945, by Printing and Publishing. Revokes the direction.

Electric Motors—Amendment L-341 (Feb. 28, 1945)—To allow commercial type electric motor manufacturers more time to plan their schedules, WPB will give motor users advance authorizations to purchase for two quarters. Previously, advance authorizations were granted for only one quarter, officials explained.

Fiber Containers—Amendment L-317 (Feb. 6, 1945)—A five per cent cut in the use of new fiber shipping containers for non-military purposes was ordered by WPB. The amendment limits the quarterly use of such containers to a number that will require only 95 per cent of the total containerboard (by both weight and area) in the containers lawfully used by a packer in the corresponding quarter of 1944.

Phthalic Alkyd Resins—Amendment schedule 59 of M-300 (Feb. 12, 1945)—This amendment tightened the restrictions and generally brought the provisions of the schedule up to date.

Paper Dealers—Amendments L-244, L-245 (Feb. 5, 1945)—Printing paper suppliers, printers, binders, distributors, wholesalers and dealers were made subject to WPB limitation orders restricting use of paper in magazines and books.

Slab Zinc—Amendment M-11 (Feb. 27, 1945)—WPB announced that through this amendment, effective April 1, 1945, slab zinc would be placed under allocation controls similar to those in operation from June 1, 1942, to September 15, 1944. Resumption of allocation controls is necessitated by increasing ammunition requirements and other war needs, WPB said.

Chemicals Distribution

ON March 26, the War Production Board made public the distribution of chemicals for civilian use in March under allocation orders of the Chemicals Bureau. Out of the many chemicals acted upon by the Bureau, some of those used in the printing industry are as follows:

ACETONE—15% of requests were granted for use in various civilian manufacturing operations except for bookbinding and book cloth. WPB reports that sharp increase in requirements for March coupled with increases in several military items have greatly reduced the amount available for civilian purposes.

CHARCOAL—None has been released for civilian use in March.

CHROME PIGMENTS — Allotments were consistent with requirements of Order M-370.

ETHYL ACETATE—Protective coatings: Among the civilian end uses allowed were: Industrial machinery equipment, tools, health, safety and scientific equipment, photographic material and equipment, printing inks, printing and publishing, and engraving accessories, 100%.

SECONDARY BUTYL ALCOHOL — End uses were allowed in full for photographic material and equipment, printing inks, printing and publishing and engraving accessories 12,407 lbs.

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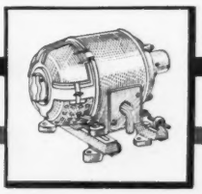

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PHENOLIC RESINS—Molding powder: Allocations for phenolic resin molding compound were granted 80% of requests for printing plates.

VINYL POLYMERS—Polyvinyl acetate: Allocations were granted 100% for bookbinding, tabbing and padding cements. Polyvinyl alcohol: Applications for flake grades were granted 100% for padding and tabbing cements, textile and paper sizing.

Recommends 5% Reduction in Delivery Orders

THE Newspaper Industry Advisory Committee has recommended that all newspaper publishers reduce their second quarter newsprint delivery orders by 5% in order to bring them into balance with supply, the War Production Board reported on March 3.

Printing and Publishing Division officials, however, expressed fears that the reduction necessary might go deeper than 5% in view of transportation difficulties and increased Government requirements.

The committee further recommended that there be no cut in the present allowable con umption. This would require use of inventories to meet reduced deliveries.

The committee's recommendations were made in the face of an expected newsprint shortage of more than 45,000 T., approximately 5¼% of estimated orders of 865,000 T., WPB officials explained.

Increased newsprint requirements of the Armed Services and other Government agencies and shipments to United Nations, neutral countries and liberated areas contribute to the deficit, they pointed out.

The committee limited its recommendation of a 5% delivery curtailment to the second quarter only, because, members said, they believed adequate supplies of newsprint may be available during the second half of 1945. They also recommended that the fractional carload delivery provisions now in the newspaper order (L-240) should continue without change in order to prevent delivery delays and severe inventory reductions by small users.

Another recommendation was that the WPB Printing and Publishing Division establish a system of certification to break down the newsprint purchases of paper dealers and brokers according to the several limitation orders under which newsprint will be consumed. The proposed system would provide protection for a dealer's established newsprint customers, it was said.

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Industrial Research Chemist

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Looking . . . into the postwar period — Printing executive discusses pertinent subjects for the commercial printer —Executive timbre, Offset-lith installation, rotary presses of medium size, plant layout and production control

By RUSSELL B. HOGAN*

**Plant Manager, Blanchard Press, Inc., New York, N. Y. Abstract of address delivered before the Typothetae of Philadelphia, March, 1945.*

THE executive positions of the mechanical departments should be given considerable thought. Most printing organizations give little thought to the grooming of future executives. Have you ever given consideration to the fact that perhaps it would be far less costly to pension a department head who has become superannuated or perhaps continue him on the payroll in an advisory capacity? Another factor that should be considered is the remuneration paid printing executives. Is this amount enough to attract a higher type of individual to our industry, or interest those in the industry in becoming executives?

The thought most employing printers have about buying postwar equipment is, "Shall I install offset equipment?"

If a letterpress printer was operating at an extremely low profit or at a loss prior to the war, he should definitely not install offset equipment. Offset equipment, run in an inefficient manner, is more disastrous and costly than letterpress. If this same printer has money to invest, it will bring a greater return if invested in modern equipment in a branch of the graphic arts of which he at least has some knowledge. It is, however, my belief that the top flight efficient and progressive printer of the future will have the facilities available to produce the product of at least two, if not all three, of the major processes.

I do not think the machinery manufacturers—with more orders than will be possible for them to fill for several years after the war—will resent my next suggestion. Do not place an order for additional equipment until you are sure you are operating and receiving maximum production from your present equipment. This perhaps will enable the firm with obsolete or an insufficient amount of equipment, to get relief somewhat sooner from production problems due to the lack of equipment.

For economical production in the pressroom, presses must be operated in units of at least two. This should be considered when contemplating the installation of new presses. It is needless to mention the advantages of precision high-speed press equipment, particularly two-color presses. Due consideration should be given by the letterpress printers to multi-color sheet fed rotary presses. In this equipment lies the greatest asset of letterpress in competing with the offset process.

For a number of years I have urged press manufacturers to build a medium size two-color press, then a two-color sheet fed rotary press. This equipment was finally manufactured and the postwar period will find other press manufacturers entering this field. With this in mind I now advocate the building of a job cylinder size of two-color press.

Plant layout is very important, particularly in future planning. A plant layout for streamline production is best accomplished when the manufacturing departments are on one floor. The placing of new equipment should be well planned. Perhaps it is better to move other equipment when installing a piece of machinery. In most cases the new equipment is placed in a vacant space or where the old equipment stood.

Every plant should have a definite procedure for production, starting with a production control system. This can be divided into two divisions; orders in the house and work in process. This should also be followed up with a procedure for production in all mechanical departments. This is especially true of the pressroom where a makeready system should be used. A pre-makeready system should also function in conjunction with the pressroom system.

The maintenance of equipment while always an important one should be given extreme attention at the present.

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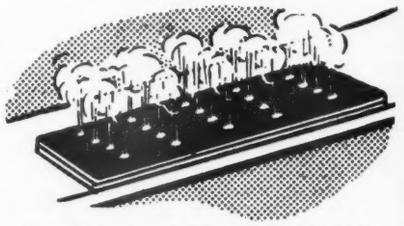

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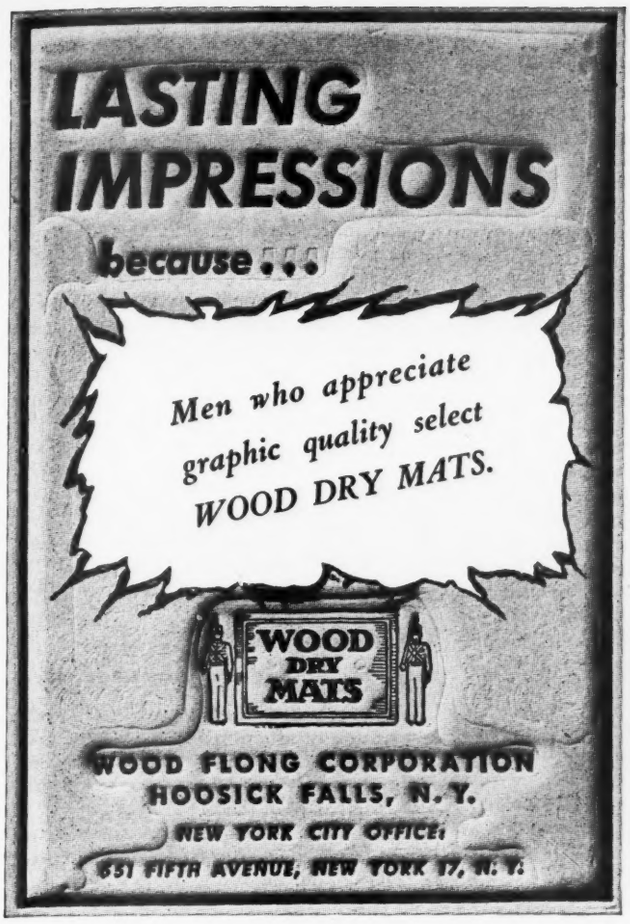
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Selecting The Right Job For The Handicapped Veteran

IN the case of any physically handicapped person who is to be trained for any job, the first consideration is to make sure that he is able—with or without the standard appliance—to meet the motion demands of that job. Not until this question is answered in the affirmative, is it worth while to measure him regarding all such other requirements of the job as mental ability, previous education, morale or general physical health or strength. Fundamental, therefore, in the training of any handicapped veteran is the question whether he can do the job—whatever it may be.

As a help in the study of the motion demands of the jobs in any occupation in their relation to the handicaps of workers, Dunwoody Institute has developed an analysis chart and a manual explaining its use. The chart and manual are the results of thirty years of experience in analyzing the pay roll jobs of the specific trades taught by the school. The charts having to do with handicaps were developed by the staff of the school and checked by experienced executives and representatives of labor for each occupation studied. Both charts and manual have proven invaluable in making analyses of the relation of standard handicaps to the motion demands of specific jobs.

The school is now ready to furnish these helps at cost to any institution, organization, or individual concerned officially or personally with the problem of either handicapped veterans or civilians. For further information see material available and price below.

Occupations, Jobs, and Charts

The Dunwoody analyses of industrial occupations are listed below. The figures after each occupation indicate the number of charts used in analyzing the jobs of each occupation. The completed charts can be secured at 25¢ each postpaid; the General Manual for 50¢ each postpaid; and the blank work charts for use in analyzing other occupations can be secured for 25¢ each postpaid, from Dunwoody Institute, 818 Wayzata Blvd., Minneapolis 3, Minn.

Air Conditioning 1, Automotive 1, Baking—Large Shop 1, Baking—Small Shop and Laboratories 1. Building Construction 1. Electrical—Central Station 3. Electrical—Manufacturing 3. Electrical—Communications 2. Electrical—Transportation 1. Electrical—Construction and Maintenance 2. Electrical—Specialties 1. Electrical—Business 1. Machanical Drafting 1, Machine Shop 1, Printing 1, Sheet Metal 1, Welding—Arc 1, Welding—Gas 1.

Executives Assisting in Preparing Charts for Printing Industry

The following men, most of whom are well known throughout the country, assisted in the preparation of the Dunwoody charts "Analyzing Job Demands and Physical Handicaps" for the printing industry, all of Minneapolis:

George L. Curle, Head Machinist, Minneapolis (Minn.) Daily *Times*; C. A. Groettum, Supt., Jensen Printing Co.; R. H. Jordan, Supt., Bureau of Engraving; A. C. Linburg, Pressroom Supt., Imperial Printing Co.; H. E. Magnus, Machinist Operator, Little Press, Inc.; Abel O. Norbeck, Sec.-Treas., Printing Pressmen and Assistants Union, No. 20; Allen H. Pahr, Supt., Augsburg Publishing House; Herman J. Schilken, Pressroom Supt., Flour City Paper Box Company, and V. C. Eck, Linotype Instructor, L. I. Porter, Presswork Instructor, F. J. Landon, Head of Printing Dept., all three from Dunwoody Institute, in Minneapolis.

Moves Laboratory and Offices To New Quarters

Walter Huber of Walter Huber & Co., which firm supplies a technical service to the printing industry, announces that the organization has been moved offices and laboratory to 100 Gold St., New York 7, New York. The old office address was at 257 Fourth Ave. The move was necessitated by an increase in personnel. Larger laboratory and office facilities will be provided at the 100 Gold St. address.

Printers

(Continued from Page 28)

Further preparatory steps were outlined by Mr. Huddleston as follows: "On a great many postwar jobs, it is practicable to have the dummy or layout prepared at once. The very necessity to do this will be a spur to clear thinking, and don't let anyone tell you (not even your other self) that a lot of the delays in getting started aren't just personal proscrastination.

"Your customers will be glad to cooperate with you now, if they understand that it will save them some headaches later. ATF has for some time been urging printers to help their customers do just this sort of planning and preparation, and giving them the materials with which to do it. Forms and instructions on *How to Plan Now for Tomorrow's Printing* have been furnished to printers all over the country, both to enable the printers to line up the additional facilities they will need and to persuade printers' customers to plan their future needs now so that printers will know what to provide.

No Printer Ever Wanted to Delay Delivery of a Job

"I never yet knew a printer that wanted to delay delivery of a job. A little straight thinking would show that a printer's alibis have their roots in the customer's demand for more than physical equipment can produce. The printer doesn't get paid until after the job leaves his shop. He wants to get it out quick—but a press rolls at just so many thousand impressions an hour regardless of a customer's impatience, and sheets cannot be backed up until the ink is dry.

"Also in producing a piece of printed matter, often there are many operations that take far longer than the average buyer realizes. For instance, a half million 8½x11 sheets run 18 up cannot be cut, trimmed, packed, and delivered the day after they come from the press, even in normal times. Try lugging the couple of tons of paper that job represents up to the cutter, and making the over 600 separate cuts, and then carting the trimmed sheets to the packing table, and you'll soon see what I mean.

"A little energy might be spent very profitably in analyzing the time requirements of a typical printing job—even assuming for the moment the absurd notion of that one job riding straight through the plant alone. It would show the desirability of setting up a reverse time table, starting with delivery date and working each successive operation backward with due allowance for the time it will take. Then figure what will happen when that job finds itself with a few score larger and smaller jobs in a shop whose total capacity would be strained to handle half that number at once.

"Such time-table planning and producing—getting into work now everything that can be done now—playing ball with the customer so that he can play ball with you—is the only way to avoid ultimate disappointment. Any other reliance is futile.

"Unbiased investigations indicate the country's printers are already planning to spend over $60,000,000 for equipment alone, the first year after the war, and more than $70,000,000 additional for new construction. But not a penny of that is going to help the buyer who needs his printing immediately after V-Day.

"Printing equipment manufacturers are right now taking printers' reservations for presses to be delivered after the war. But those presses will not be built until after the war. Not one of them will turn out a job that is needed for V-Day, because that is presumably only when the press is going to begin to be manufactured; not delivered to the printer. How long that will take must depend on when Government restrictions on manufacturing will be lifted and the necessary materials released.

Bulk of Work Will Have to be Done with Present Equipment

"The bulk of your immediate postwar printing production will have to be done with the machinery you are now using. That means you ought to take the best possible care of the presses you've got, to make them last. It also means you will need to figure on how to get more production out of these presses postwar if you find that you need it. One way is more manpower and you certainly will

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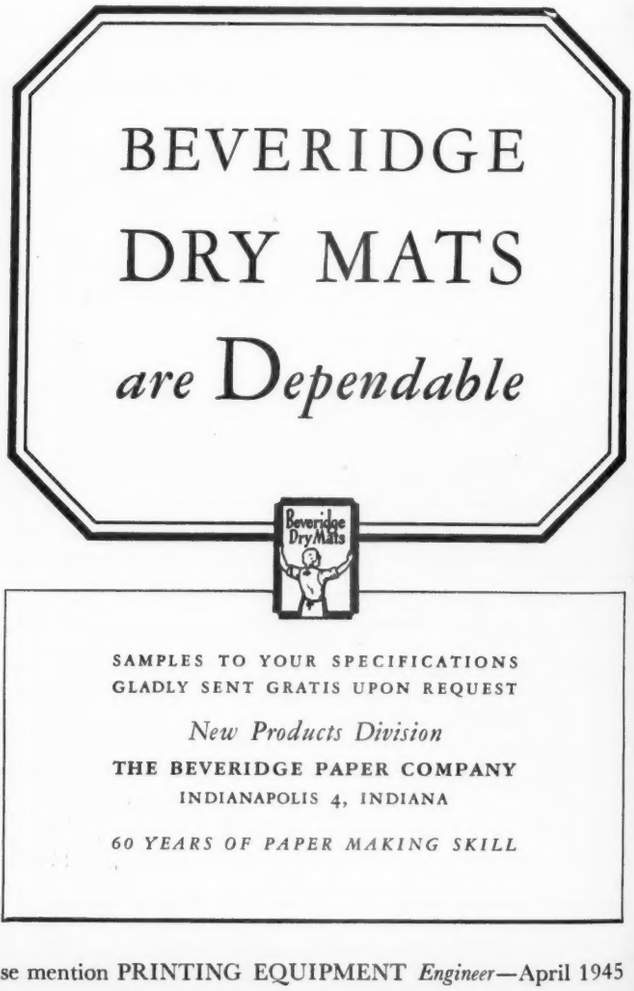

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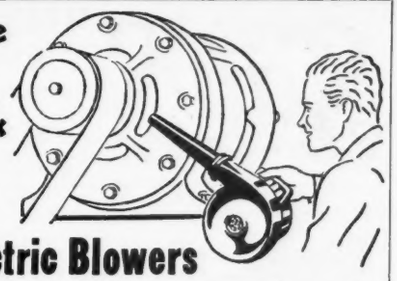

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have that as soon as war production cut back.

"But for the vast majority of printing jobs that will be required at V-Day or immediately afterward, copy can be written now, artwork completed and plates made now, type set and proofs corrected now, and much of all this can even be printed now and put on the shelves. That will work tremendously to relieve the inevitable congestion later; will give a greater assurance of having the jobs well done; and will help to provide the facilities and time required to produce, when they are needed the jobs that cannot be tackled until then because of engineering or other imperative difficulties."

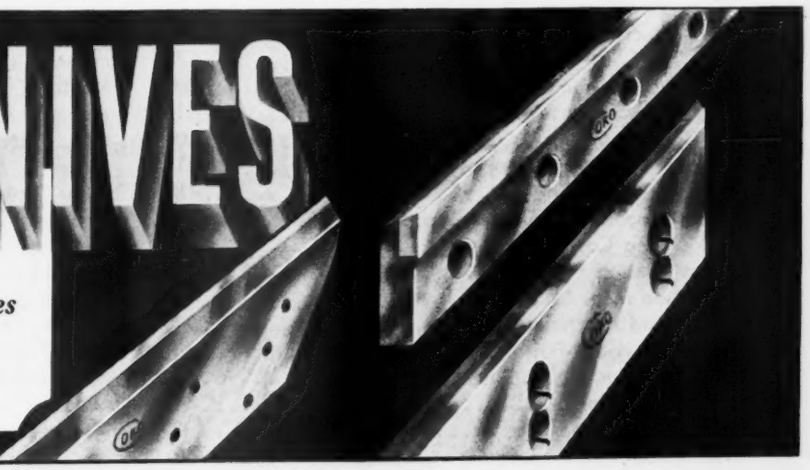
Mr. Huddleston urged that another way in which printers can do some practical planning for postwar is to consider new processes when they become available. For example, said he: "Consider offset in combination with letterpress."

New Methods of Selling Needed

Mr. Huddleston stated that printers have been doing an excellent job of streamlining their plants and equipment and planning to handle postwar orders. But too few printers know much about their customers' business. They will follow instructions if they have to stay up all night. Being splendid craftsmen, they know their job well. But the industry as a whole has not yet shed its reliance on competitive prices and speed. After the war, buyers are not going to be content with the man who has little more to offer than to do the job cheaper or quicker.

"In the future," asserted the speaker, "printing is going to have to be sold. Expecting the customer to buy it won't be good enough. Waiting for the telephone to ring won't pay dividends. A printer doing business with a manufacturer ought to make himself familiar with his customer's (1) products and their distribution channels, (2) with the customer's departments and their functions, and (3) he should be familiar with present printed material the customer keeps in stock, and if possible, have some knowledge of what was done in the past."

OHIO KNIVES



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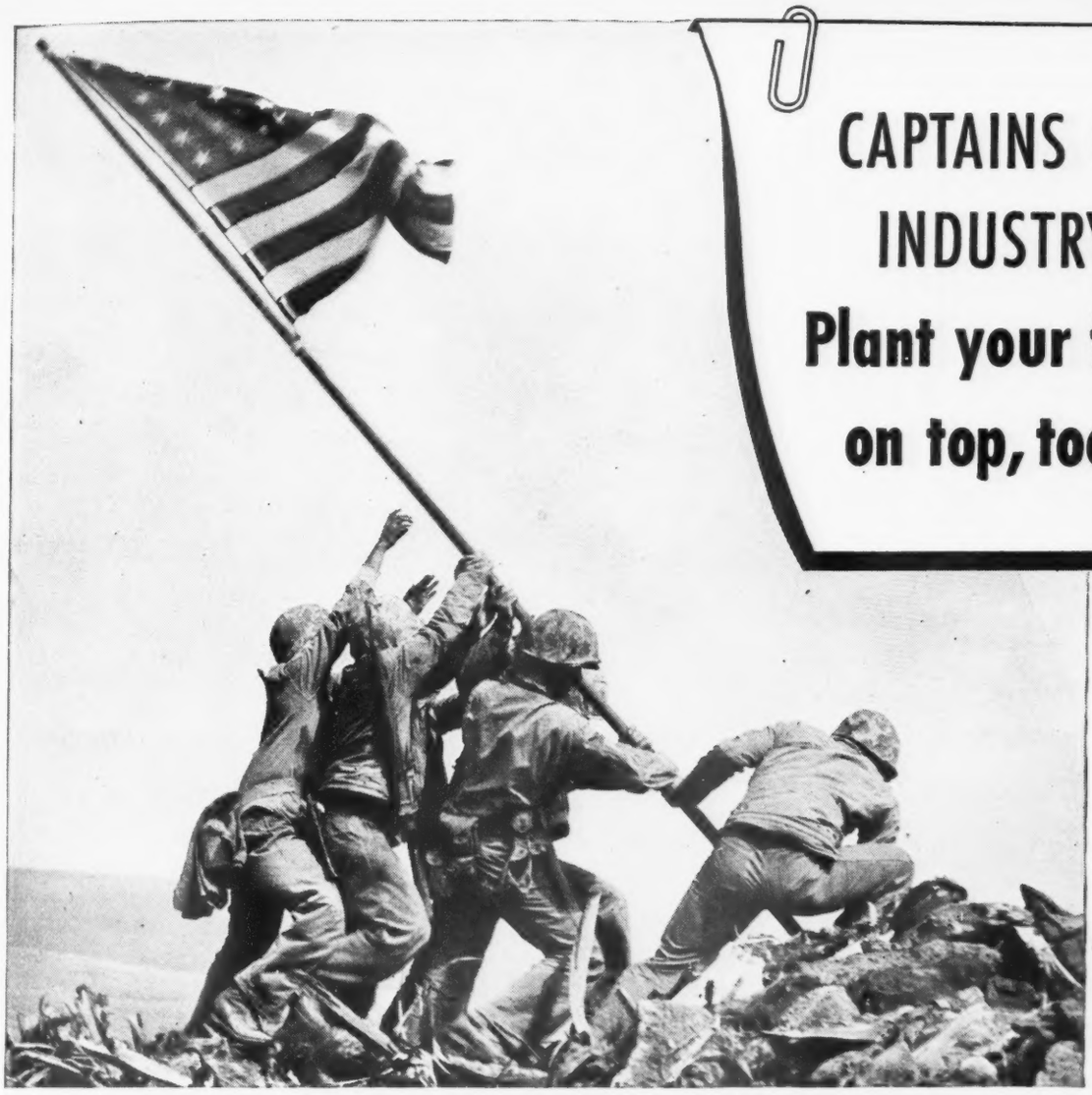

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Our Marines went over-the-top at Iwo Jima in the greatest, and hardest, battle in the Corps' history. Now it's *your* turn! Your quota in the 7th is needed to help finish this war, sidetrack inflation, build prosperity. So, captains of industry, plant your flag on top—like the Marines at Iwo Jima!

★

CAPTAINS of INDUSTRY—here's your *Check List* for a successful plant drive:

- ★ **Get your copy of the "7th War Loan Company Quotas" from your local War Finance Chairman. Study it!**
- ★ **Determine *your* quota in E Bonds — the backbone of every War Loan.**
- ★ **Arrange for plant-wide showings of "Mr. & Mrs. America"—the new Treasury film.**
- ★ **Distribute "How to Get There"—a new War Finance Division booklet explaining the benefits of War Bonds.**
- ★ **Circulate envelopes for keeping bonds safe.**
- ★ **Display 7th War Loan posters at strategic points.**
- ★ **And—see that a bench-to-bench, office-to-office 7th War Loan canvass is made.**

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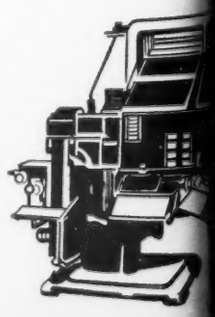

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